BOOKS printed for JOHN WHISTON *and* LOCKYER DAVIS *in* Fleet-ſtreet, *and* JOHN WARD *at the* Royal Exchange.

I. THE Hiſtory of the Five *Indian* Nations of *CANADA*, which are the Barrier between the *Engliſh* and *French* in that Part of the World. With particular Accounts of their Religion, Manners, Cuſtoms, Laws, and Government; their ſeveral Battles and Treaties with the *European* Nations; their Wars with the other *Indians*; and a true Account of the preſent State of our Trade with them. In which are ſhewn the great Advantage of their Trade and Alliance to the *Britiſh* Nation, and the Intrigues and Attempts of the *French* to engage them from us; a Subject nearly concerning all our *American* Plantations, and highly meriting the Conſideration of the *Britiſh* Nation. By the Honourable *Cadwallader Colden*, Eſq; One of his Majeſty's Counſel, and Surveyor-General of *New-York*. To which are added, Accounts of the ſeveral other Nations of *Indians* in *North-America*, their Numbers, Strength, *&c.* and the Treaties which have been lately made with them. The Second Edition.

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GEO. C. SHATTUCK.

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PREDICTION

OF VARIOUS

CRISES

BY THE

PULSE,

Independent of the Critical Signs delivered by the Ancients;

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To which are added,

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By JAMES NIHELL, *M. D.*

The SECOND EDITION.

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Printed for John Whiston, at Mr. *Boyle's Head*, Lockyer Davis at Lord *Bacon's Head*, both in *Fleet-street*, and John Ward opposite the *Royal Exchange*.

MDCCL.

[Price Two Shillings.]

Shelfmark

TO

Dr. MEAD,

Physician to his Majesty.

SIR,

AS your Sense of the Advantage which may result from the following Observations to *Medicine* and to Mankind, is the

moſt honourable Encouragement I could have to make them public, ſo the Weight you here vouchſafe to add to them by the Sanction of your Name, is the moſt effectual Preparation to an unprejudiced Reception of this Work from the World.

You are ſenſible, SIR, that the Subject I treat is, perhaps, at firſt Sight, the moſt expoſed to Objections of any that has been publiſhed in the preſent Age. To call forth from Obſcurity the long-neglected and

almoſt forgotten Obſervance of *Criſes*, may be eaſily miſunderſtood for an Attempt to revive old exploded Prejudices: To propoſe New Obſervations on the Pulſe, a Subject which within the Memory of many Phyſicians yet living, has been clogged beyond all Meaſure and Comprehenſion, with a thouſand intricate Subtilties, ancient and modern, foreign and domeſtic, may, not improbably, appear chimerical and abſurd: But particularly, to attempt the Prediction of *Criſes* by Means

ſo extraordinary and ſo little thought of as the Pulſe, may, with a near Reſemblance to Truth, be deemed an affected Singularity, and an arbitrary Hypotheſis. Such is the hazardous Enterprize of an Author, whoſe principal Subject is blended with Matters long fallen into Diſcredit! Theſe, on the very firſt Mention, occur to the Mind under the contemptible Idea of ſtale Errors, caſt a diſadvantageous Shade on the reſt of the Subject, and involve the Whole in one common Charge

Charge of Inſignificancy. A Prejudice of this kind generally precludes any farther Examination of the Author's Deſign or Performance, and damns the Work yet unread to Neglect and Oblivion.

Under theſe and other like Difficulties would the following Obſervations probably ſink on their firſt Appearance, did not an Authority ſo much reſpected in *Medicine* as yours, recal the haſty Critic to a cooler Thought, and beſpeak his Attention to the *Facts* I propoſe.

A Work judged both new, and of uſeful Tendency, by a Perſon of your eminent Erudition, and long Experience, immediately acquires an Air of Importance ſuperior to any preconceived Opinion of Weakneſs, and becomes the Object of the moſt ſerious Reflection. It is therefore no Compliment to acknowlege, that whatever public Advantage may accrue from this Work, will be in a great meaſure due to your Influence.

Thus,

Thus, having yourſelf cultivated the *Art of Healing* with an allowed happy Succeſs, you make, by encouraging its Improvement in others, the nobleſt Uſe of the great Reputation you have obtained.

Give me Leave, SIR, to aſſure you, that I am with all the Reſpect due to ſo valuable a Character,

SIR,

Your moſt humble, and

Moſt obedient Servant,

JAMES NIHELL.

Thus having yourself cultivated the Art of Pleasing with an allowed happy Success, you make, by encouraging its improvement in others, the noblest Use of the great Reputation you have obtained.

Give me leave, Sir, to assure you, that I am with all the Respect due to so valuable a Character,

SIR,

Your most humble, and

Most obedient Servant,

JAMES MINIFIE.

THE PREFACE.

THE Streſs of the following Work principally lies in two Points, *viz.* In the Novelty, and in the Truth, of the *Facts* it contains. That the *Facts* are both New and Extraordinary, will be readily acknowleged by every Reader who is acquainted with what has hitherto been written on the Pulſe, with reſpect to *Criſes*. I ſhall therefore loſe no Time in proving what, I am certain, will not, on the Peruſal of this Work, be denied. But the other Point, I mean the Truth of the *Facts*, is of a more delicate and doubtful Nature, expoſed to jealous Suſpicion,

cion, which ever grows upon the Mind, in proportion as the Subject is new and ſurpriſing. Here then it may be reaſonably expected in its greateſt Degree of Warineſs. Hiſtories of *Criſes* by Sweat, Diarrhœa's and Hemorrhages, prognoſticated merely by the Pulſe, ſome three, ſome four Days before they happened, if unſupported by collateral Proofs, muſt look like fabulous Inventions, or deluſive Tales of Inchantment. To remove ſo natural and ſo juſt Apprehenſions of an Impoſition in a Caſe of this Nature, it becomes neceſſary to let the World know, under what Authority and Sanction the *Facts* which make the Bulk of this Work, are offered to the Public: And this will beſt appear by the following Narration.

In the Year 1737, a Work written in *Spaniſh* by Dr. *Don Franciſco Solano de Luque*, concerning *the Prediction*

diction of Criſes by the Pulſe, under the Title of *Lapis Lydius Apollinis*, was put into my Hands by *Don Pedro Roxo*, honorary Member of the Medical Academy of *Madrid*, and Phyſician to the Hoſpital of *San Juan de Dios* in *Cadiz*, as I then was to the *Britiſh* Factory of the ſame City. He told me he had ſome Experience of the Truth of Dr. *Solano*'s Diſcovery, and complained of the ſupine Indolence of his Countrymen, who totally neglected a Matter of ſo great Importance, ſo new, and ſo ſtrongly ſupported by *Facts*, as that which the Doctor propoſed ſeemed to be.

Struck with the Newneſs and Moment of the Subject, I read the Book with uncommon Diligence. The Doctor's Obſervations extremely ſurpriſed me, and appeared to me ſuch as my Friend had repreſented them. I found the whole Matter propoſed with the greateſt Candor, the new

Critical

Critical Signs deſcribed without Reſerve, the Connexion between each of theſe and its reſpective Criſis eſtabliſhed by *Facts*, and the *Facts* themſelves ſupported by the Teſtimony of the moſt dignified Perſons of the City in which they happened, particularly of the Phyſicians, the Doctor's Rivals in Practice, who could not poſſibly be ſuſpected of a Colluſion in his favour, I ſay an unnatural Colluſion to raiſe his Character and Intereſt, in Detriment of their own, by *public Falſhood and Impoſture*. The Doctor having in this manner enabled his Readers to examine into the Truth of the *Facts* he alleged, and to bring the Matter to the Teſt of their own Experience, earneſtly invited them to both the one and the other of theſe Trials. It was neither to be imagined, that ſo many Witneſſes of all Ranks as the Doctor named, could be impoſed on in *plain Matters of Fact*, nor on the other hand, that he durſt

publicly

publicly abuſe their Authority to cloak a notorious Piece of Forgery. Thus did Dr. *Solano*'s Obſervations appear veſted with all the Circumſtances of *Candor*, and *public Sanction*, that could be wiſhed for. However, to prevent the leaſt Doubt in a Matter of ſo great Importance, I determined to go to *Antequera*, which was but three Days Journey diſtant from *Cadiz*, to examine into the Truth of the Doctor's Facts, and, if they were ſuch as he repreſented them, to acquire, under him, a thorough Experience in his new Art of prognoſticating *Criſes*. He received me with great Humanity, and procured me all the Opportunities I could deſire of a free impartial Inquiry into his paſt Obſervations, and of ſeeing ſuch as occured during my Stay in *Antequera*, which was the Space of two Months. In this Time I frequently converſed with a great Variety of Perſons, whom he had named in his Book, as *Witneſſes to his*

Facts:

Facts: Among theſe were ſeveral Men of diſtinguiſhed Rank and Character, who all, without Exception, confirmed the Caſes in which they were mentioned; are for the greater Part yet living, and ready to atteſt them. This general and uniform Concurrence of all Sets of People, particularly of the Phyſicians, in Teſtimony of Dr. *Solano's Facts*, (a Matter in which there could be no Illuſion) is the higheſt Degree of Authority and Sanction, which the Nature of ſuch Things admits, and will appear a convincing Evidence on reading ſeveral of his Obſervations in the following Sheets.

Should any additional Circumſtances of Credibility be required, they will be found in *like Facts* obſerved by other Phyſicians, beſides myſelf ſince Dr. *Solano*'s Obſervations, nay by ſome Perſons of his Acquaintance, who, tho' Strangers to

Me-

Medicine, acquired, from the *Lapis Lydius* above-mentioned, a ſufficient Knowledge of this Matter, to make ſome ſucceſsful Obſervations, as will appear by the Sequel of this Work, *Part* I. *Sect.* II. *Ch.* 3. *Obſ.* 6. I was perſonally acquainted with moſt of the Gentlemen here hinted at, and am confident they had no Intereſt in impoſing falſe Facts on the World; nay, I dare be poſitive, that no Motive was ſufficient to betray ſuch of them, as I was intimate with, into ſo baſe an Impoſition. Some I knew who, blindly prejudiced againſt Dr. *Solano*'s Obſervations, overlooked even ſuch Facts as occurred to themſelves in this way, until they were by the Evidence of ſome Caſes ſhamed out of their Neglect, and at laſt gained over by mere Dint of Experience. I make no particular mention of myſelf, but leave the Reader to judge of my Sincerity, from the Manner in which I treat the whole Subject, becauſe I am conſcious

this alone can, and will be the Rule of his Judgment with reſpect to me.

Tho' the *Facts* juſt mentioned, I mean ſuch as are poſterior to Dr. *Solano*'s Obſervations, will be found convincing beyond all the Power of Prejudice and Cavil, yet they afford leſs Pleaſure and Surprize than ſuch as have been accidentally obſerved before him, when there was not the leaſt Surmiſe of this Matter, no Byaſs from Novelty on the Imagination; and conſequently, when the *Facts*, by the mere Strength of their own Evidence, muſt have broken forth through the Prejudices of the Times, and the Inadvertency of the Obſervers. It is eaſily conceived, how few Obſervations of this Character are to be expected: Providence has however been pleaſed to preſerve an *extraordinary* one in the Writings of *Proſper Alpinus*; a *Fact* which ſince this Author's Time has remained on the Records of *Medicine* a dark impe-

impenetrable Myſtery to the *whole Faculty*; but is now cleared up by the Light it receives from Dr. *Solano*'s Obſervations, and becomes a manifeſt Proof in favour of them, as will be ſeen at the Concluſion of this Work. The Obſervation of *Proſper Alpinus* is not the only one of this Kind: *Wierus* furniſhes another, which ſhall be related in the Place laſt-mentioned.

Such is the Evidence by which the *Facts* offered to the Public in this Work are ſupported; and ſurely ſo many and ſo ſtrong Proofs have ſeldom concurred in favour of any Obſervations hitherto publiſhed in Medicine!

Dr. *Solano*, beſides his *Facts*, communicated to the World a *Set of Rules*, for the Prognoſtication of *Criſes* by the Pulſe, Rules which he deduced from a long Series of Obſervation on this Matter: But they are to be con-

ſidered in a Light very different from *the Facts*. Nothing is more common than miſtaken Inferences from undeniable *Data*; this kind of Error the Doctor has fallen into by ſtraining the Matter, and making his Rules *too abſolute and extenſive*, as I ſhall ſhew from my own Experience in the ſecond Part of this Work, and as every judicious Phyſician will immediately perceive by the Doctor's firſt general Propoſition concerning the *Intermitting Pulſe*. However, ſuch a Miſtake was particularly excuſable in the Doctor, whoſe Erudition in *Medicine*, and Knowlege of Natural Philoſophy, was, according to the unhappy State of Learning in his Country, too weak to counterbalance the deep and overbearing Impreſſions, which *a great Number of new and extraordinary Facts* had made on his Imagination. This Hint I thought neceſſary, to obviate any pre-

mature

mature Exceptions againſt the Work in general, on account of ſome palpable Errors which occur in the Doctor's Rules for the Prognoſtication of *Criſes*; and hope the Reader will be pleaſed to ſuſpend his Judgment on this Head, until he has ſeen the Light in which I place this Matter in the Second Part of the Work, the rather becauſe he cannot be a competent Judge of the Caſe, before he has read the *Facts*.

As the Death of my Friend Dr. *Roxo*, who allowed me an entire Liberty of making what Remarks I pleaſed in the Hoſpital of *San Juan de Dios* of *Cadiz*, and my travelling ſoon after, together with ſome other Avocations, have for theſe two Years laſt paſt prevented any farther Purſuit of my Obſervations in the *Solanian* way, I would have deferred publiſhing them until they became more deciſive, did not the following Circum-

ſtances forbid the Delay. The Firſt is the little Advantage to be expected from what Dr. *Solano* has publiſhed on this Matter in his *Lapis Lydius*, a large and tedious *Folio*, in which the principal Subject is choaked up with an immenſe Number of foreign Digreſſions, Diſſertations and Harangues, jumbled into a perplexed Labyrinth of Reaſoning and Facts: for the Doctor, though a diligent Obſerver, was by the Misfortune of his Education, in the common way of his Country, an abſolute Stanger to methodical Writing *. The ſecond Circumſtance is the Doctor's Death, which happened ſoon after my Departure from *Antequera*, while he was, by my Perſua-

* There was indeed in the Year 1737, an Abridgment of the *Lapis Lydius* publiſhed in a large 12*mo*. with the Doctor's Conſent, by Dr. *Don Manuel Gutierrez de los Rios*; but the injudicious Editor ſtill tranſcribed from the Original as much of the above-mentioned *Farrago* as could be ſtuffed into ſo ſmall a Volume with a thouſand additional Impertinences from the *Helmontian* Philoſophy.

ſion,

ſion, preparing a correct and ſuccinct Edition of his *Obſervations*, which, with ſeveral excellent *Facts* newly obſerved both by him and others, was then loſt. The Third is the indolent Neglect of the *Spaniſh* Phyſicians, who, though ſpirited by my Journey to *Antequera* into a ſucceſsful Application to Dr. *Solano*'s Diſcovery, abandoned it (as ſoon as he expired, and the Spur of Emulation was no longer applied) without affording the leaſt Hope of any farther Aſſiſtance from them. Thus does the whole Weight of this important Affair entirely devolve on me. Uncertain of my own Fate, I thought it imprudent to delay the Publication of what I have preſerved on this Matter, under the doubtful Hope of giving hereafter more complete Obſervations than thoſe which I have already made, the more becauſe I am convinced from the Extent and Variety of the Subject, and from the Difficulties which in the preſent State of Prac-

tice obſtruct *a nice and exquiſite Obſervation*, that this Matter is greatly ſuperior to the Diligence of any one Man. I therefore call in Time for the Aſſiſtance of my Brother Phyſicians in this Purſuit: 'Tis true, I call them to a laborious Task, and to a minute Inquiry into Things; but then they are *Britiſh* Phyſicians, whoſe happy Application to the Improvement of their Art is well known over all *Europe*.

To render the Examination of this Matter more eaſy to the Curious, I begin the following Work with a minute Deſcription of all the Circumſtances hitherto obſerved concerning Dr. *Solano*'s Critical Pulſes, and of all the Circumſtances of the *Criſes* thereby ſignified: Next, I proceed to the *particular Matters of Fact*, by which the Reality of the Doctor's Obſervations is aſcertained: And thus in the Firſt Part of the Work I propoſe the whole Matter juſt in the State

in

in which I found it when I began my own Obſervations.

The Second Part contains, my own Obſervations, and thoſe communicated to me by my Friends, all faithfully related, with ſuch Corrections and Remarks as appeared neceſſary, on Dr. *Solano*'s Rules for the Prognoſtication of *Criſes*, on the *Matters of Fact* hitherto obſerved, and on the Tendency and Uſe of the Whole.

Should the Reader obſerve any little Inaccuracies in the *Facts* related from others, he will be pleaſed to conſider, that I at firſt collected them for my own private Improvement, without any Deſign of publiſhing them, becauſe I had engaged Dr. *Solano* to give a new and correct Edition of Obſervations on this Subject. After the Doctor's Death, the only proper Information I could receive was from his

his Manuſcript, which, tho' I offered to buy it, was refuſed me. However, the Inaccuracies here hinted at are not of any great Moment.

As much as the Number of Obſervations I thought neceſſary to produce in Proof of a Matter equally *new and ſurpriſing*, would permit, I have avoided a *Sameneſs* in the Facts; and have therefore ſingled out from all thoſe I have in my Papers, ſuch as bear the leaſt Reſemblance to each other in their particular Circumſtances: But notwithſtanding all my Care, this Inconveniency could not be entirely avoided in forty-ſix Obſervations on the ſame general Subject; and the Reader is not to require, in a Work of *ſevere Truth*, the Charms of that luxuriant Variety, which the unreſtrained Freedom of Fiction admits.

Some Readers may expect I ſhould in this Work take Notice of the ſo much vaunted

vaunted *Art of Pulſe-feeling* among the *Chineſe*: But, notwithſtanding the wonderful Tales that are written and told of theſe famed *Aſiatics*, and the painful Efforts of a Modern Author to explain and ſupport them *, whoever is pleaſed to peruſe what is publiſhed on this Subject from the beſt original Writings of the *Chineſe* Phyſicians, in *Pere du Halde*'s late Hiſtory of *China*, will readily forgive the Omiſſion of ſuch impertinent Trifles, and groſs Abſurdities, as are there related.

For the Satisfaction of ſuch as may, from the preſent State of Practice, be apt to take Exceptions to the Obſervance of *Criſes* on any Terms, I have added a particular Chapter on this Subject, which I hope the Reader will peruſe before he forms any abſolute Judgment of the following Work

* In the *Phyſician's Pulſe-watch.*

from

from the common prevailing Notions of *Criſes*. I dare promiſe him, he will find this and the reſt of the Subject treated with all the Impartiality, Brevity, and Reſervedneſs in Reaſoning, which becomes an Author equally diffident of his own private Judgment, and ſenſible of the Reſpect due to the Public.

N. B. The Author will be obliged to ſuch Phyſicians who ſhall be pleaſed to communicate to him any material *Facts* relative to the preſent Work: They are to be adreſſed for the Author, to the *Grecian Coffee-houſe* in *Devereux-Court*, *London*. The ſame Juſtice ſhall be done him, as he now ſees obſerved in favour of the following Gentlemen.

A LIST

A LIST of the Physicians who have confirmed and illustrated Dr. Solano's *Observations from their own Experience.*

Don Francisco Thomas de Zayas, late Honorary Physician to his Catholic Majesty's Royal Family,

Don Antonio Alvarez,
Don Miguel de Porras,
Don Joseph Vincente Gomez,
All four Physicians of *Antequera*.

Don Francisco Garcia, Mallen de Navarrete, late Physician to the Chapter of the Cathedral of *Cadiz*.

Don Pedro Roxo, late of *Cadiz*, Physician to the Hospital of *San Juan de Dios* of the same City, and Honorary Member of the Medical Academy of *Madrid*.

Don Raphael de Fuentes,
Don Nicolas Rexano,
Physicians at *Malaga*.

Don

Don Pedro Caſtan, Phyſician at *Caſa Vermeja*.

N. N. Phyſician at *Loxa*, whoſe Name I do not call to Memory.

Don Chriſtoval Solano de Luque, Son to Dr. *Solano*, and Student in Phyſic.

Don Juan de Pedraza y Caſtilla, Batchelor in Philoſophy and Medicine.

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TO THE READER.

IN looking over ſome of my Papers, I have found a Thermometrical Journal, which I kept in Cadiz, *and thought it might be of ſome Amuſement or Uſe to ſet down here the various Succeſſion of Heat and Cold obſerved in that City round the whole Year, the rather becauſe the Thermometers I made uſe of were thoſe of* Fharenheit, *ſo equal to each other, and ſo common, that Experiments made therewith may be reduced to a general Standard, and compared to each other with tolerable Eaſe and Accuracy.*

To the READER.

These Observations were made in the Shade of a Room neither much exposed to, nor remote from the Influence of the Sun, and therefore they mark the natural Temperature of the Air which the Inhabitants of Cadiz *generally breathe in their Houses; and it is to be observed, to avoid any mistaken Applications to other Places, that the Air of* Cadiz *is, both in Winter and Summer, perhaps the most temperate of any City in* Andalusia.

According to the most exact Observations I could make for the Space of three Years, in the Circumstances just now mentioned, the Heat and Cold in the Circle of the Year ran between the Degrees 49 *and* 81, *the two Extremes, the first of Cold, and the last of Heat.*

From the End of November *to the Month of* April, *the Thermometer seldom rose above the* 60*th Degree.*

To the READER.

In December, January *and* February *it generally kept under* 56.

From the End of March *to near the Middle of* June *it commonly marked between* 60 *and* 70.

From about the Middle of June *to near the End of* September *it generally ſtood between* 70 *and* 76; *from* 72 *to* 75 *was the common Standard: It ſeldom ſunk to* 70, *or roſe to* 78; *tho' on the Difference of Winds I have once obſerved it to ſink in* Auguſt *to* 64, *and riſe to* 81, *the greateſt Extremes I have obſerved there in the Summer Seaſon.*

From the Shade in my Room to the Shade in the hot open Air, I have obſerved the Difference to be about 4 *and* 6 *Degrees.*

From the full Heat of the Sun in July *to the cool open Air the Night following,* 15 *Degrees.*

From

To the READER.

From about the End of September *to the End of* October *it generally ſtood between* 70 *and* 60, *and in* November *between* 66 *and* 58.

In the Circumſtances above-mentioned, and in the common Courſe of the Weather, I could ſcarce obſerve any Difference between the Heat of the Day and that of the Night.

ERRATA.

P. 31. *l.* 21. read *Subſtraction.* P. 44. *l. ult.* for *p.* 6. read *p.* 7. *P.* 47. *l.* 18. for *Signs, a Saburra,* read *Signs of a Saburra. P.* 84. *l.* 11. for *and conſequently is more prudent to prevent which,* read *and conſequently which is more,* &c. *P.* 122. *l.* 6. for *this Side was laſt then,* read *this laſt Side was then. P.* 143. read *He remarked. P.* 152. *l.* 23. after the Word *Pulſe,* add *in other Reſpects.*

Sed

Sed et accuratiſſimè eſt obſervandus Pulſus; quatenus eſt Index Materiæ Morboſæ movendæ, motæ, Excretioni paratæ, et jam incipientis ſecerni: nam ibi demonſtrat egregiè Tempus agendo aptum præter cætera.

BOERHAAVE Inſt. N°. 970.

SECTION I.

New Signs and Rules for the Prognostication of several Crises *by the* Pulse, *according to* Doctor Don Francisco Solano de Luque.

CHAPTER I.

The Signs and Rules for a Critical Hemorrhage by the Nose.

I.

THE *Pulsus Dicrotus* of the Ancients, which in *English* may be properly called the *Rebounding Pulse*, is a certain Sign of a future Critical Hemorrhage by the Nose *.

II. When

* It may not be improper to observe here, that the nearest Hint to this Proposition I have ever met with, is the following Passage in Sir *John Floyer*'s *Pulse-watch*, Vol. I. p. 138. An *undose* Pulse with *a Vibration*, is a Sign of the *Menstrua*, or some Hemorrhages by the Nose, Belly, Hemorrhoids, *&c.* A Passage which, with a thousand others, he has probably taken from *Galen*; but how really distant he is from any Notion of what is here insisted on by Dr. *Solano*, plainly appears from his absolute Silence on Hemor-

II.

When the *Rebounding Pulſe* appears at or about every thirtieth Pulſation, the Hemorrhage commonly follows in four Days after, ſomewhat ſooner or later; when it recurs at every ſixteenth Pulſation, the Hemorrhage ſupervenes in three Days; when it is obſerved at every eighth Pulſation, the Hemorrhage is to enſue in two Days, or in two Days and a half: Laſtly, when it returns at every fourth, third, ſecond Pulſation, or is continual, the Hemorrhage is to be expected within the Space of 24 Hours. Therefore, in general, the ſhorter the Periods of Pulſation, at which the *Rebounding* recurs, the nearer the Hemorrhage.

III.

Sometimes Nature runs regularly thorough all the fore-mentioned Progreſſions of the Critical Pulſe, from its firſt Appearance at every thirtieth down to every ſingle Pulſation, by which the Hemorrhage is foreſeen gradually approaching juſt in the ſame Degrees: She ſometimes inordinately haſtens or delays the Hemorrhage, and then the *Rebounding* of the Pulſe recurs with more or

rhages under the *Pulſus Dicrotus*, p. 140. Nay from his own unintelligible Deſcription of the Vibrating Pulſe, p. 50. *A Vibrating Pulſe is compared to the Motion of a Dart, and is cauſed by a vehement Contraction of the Heart, which makes the Pulſe greater.* How dark! how remote is this from any Idea of the *Rebounding Pulſe!*

leſs

leſs Frequency in the ſame Proportion; and when this returns in variable ſhifting Periods, the Time at which the Hemorrhage is to happen cannot be exactly determined.

Nota, What has been obſerved of the *Rebounding Pulſe* in the two laſt Articles, with reſpect to the various Periods of Pulſation at which it recurs, and of the Diſtance or the Proximity of the Criſis thereby ſignified, is to be underſtood of the other Critical Pulſes to be mentioned hereafter, without any farther Remark on this Head, under each of theſe Pulſes in particular.

IV.

When the Artery *rebounds* upon the Finger with great Celerity, and very briskly follows the firſt Stroke, the Hemorrhage is juſt at hand; and if then it ſhould delay a little, it will appear on the Patient's blowing his Noſe.

V.

The Quantity of the Hemorrhage is foreſeen by the Vigour with which the Artery *rebounds*, compared exactly to the Force of the firſt Stroke, be this either vehement or languid: Thus, when the Artery *rebounds* with leſs Moment than the firſt Stroke has impreſſed on the Finger, then is the Hemorrhage to be ſmall, and *vice verſâ*. But

when the *Rebounding* of the Artery and the firſt Stroke are of equal Vigour, the Hemorrhage is to be moderate.

VI.

According as the Blood flows, the *Rebounding* of the Artery ſlackens, gradually, until it entirely diſappears ſoon after the Criſis; and this gradual Remiſſion of the *Rebounding* is the Sign of an immediately preceding Hemorrhage. This Remark is alſo to be applied, *mutatis mutandis*, to the Pulſes, which denote other Criſes.

VII.

If after the Hemorrhage the *Rebounding Pulſe* ſhould continue or appear again, it denotes another Criſis of the ſame kind, according to the above-mentioned Rules. This alſo is to be applied to the other Critical Pulſes.

VIII.

When the *Rebounding* of the Artery is more evident in one Wriſt than in the other, the Blood frequently flows in greater Abundance from the Noſtril of the ſame Side, in which the *Rebounding* is more evident.

CHAP.

CHAP. II.

The Signs and Rules for the Prognoſtication of a Critical Diarrhœa, *and a conjoint Criſis by Vomiting, or by Urine.*

I.

THE *Intermitting Pulſe* is a certain Sign of a future Critical *Diarrhœa*, and becomes a mortal one then only, when the Strength requiſite to perform the Criſis fails*.

II.

The Length of Time ſpent in the *Intermiſſion* denotes the Quantity of Matter which is to flow by the *Diarrhœa*, or the Number of Stools. An *Intermiſſion* which laſts for the Space of one *Diaſtole*, or in which one *Diaſtole* alone is miſſing, points out a ſmall Evacuation, or few Stools; that which takes up the Space of two *Diaſtoles*, ſignifies an abundant Evacuation, or many Stools; and laſtly, that which takes up the Time of two *Diaſtoles* and a half, (the longeſt *Intermiſſion* Dr. *Solano* has obſerved) denotes a very abundant Evacuation, or a great Number of Stools.

* This too general Propoſition ſhall be confined to its proper Limits in the 2d Part of this Work.

Nota, As the various Frequency of the Pulſe in different Perſons, and in the ſame Perſon at different Times, allows no fixed Meaſure of Interval between each Pulſation; it is to be preſumed, that Dr. *Solano*, tho' he never gave any Explanation of this Matter, underſtood, in the preceding Article, that Meaſure or Proportion of Interval, which the regular Pulſations between the *Intermiſſions* bear the one to the other in every Patient.

III.

A Tenſion of the Artery, joined to the *Intermitting Pulſe*, is a certain Sign of a Critical Vomiting ſuperadded to the *Diarrhœa*.

IV.

A greater or leſs Tenſion of the Artery denotes a greater or leſs Evacuation by Vomiting, more or fewer Efforts to vomit. The Length of the *Intermiſſion* ſimply relates to the Quantity of the conjoint *Diarrhœa*, or to the Number of Stools.

V.

The Doctor has never obſerved a ſimple Criſis by Vomiting without a *Diarrhœa*, or conſequently whether ſuch a Criſis has any particular Sign unknown to the Ancients.

VI.

A Softneſs of the Artery joined with the *Intermiſſion*, is a certain Sign of a Criſis by Urine with the *Diarrhœa*; and the greater or leſs Quantity of *Excretion* by Urine, is denoted by a greater or leſs Degree of Softneſs in the Artery.

VII.

Dr. *Solano* has not obſerved a ſimple Criſis by Urine, without the Complication of a *Diarrhœa* in ſome Degree, and was not acquainted with any new Sign of ſuch a Criſis.

CHAP. III.

Signs and Rules for the Prognoſtication of a Critical Sweat.

I.

AS the Pulſe which denotes a future Critical Sweat has not been hitherto ſufficiently known and characterized, it is neceſſary to give a particular Deſcription of it.

II.

It is a Species of the unequal Pulſe, which in one, two, three, or four conſequent Pulſations, *riſes* in Height and Vigour above the other *Diaſtoles*.

III.

When this *Riſing* of the Pulſe recurs in one Pulſation only, it is difficult to be known, and ſcarce indicates a Critical Sweat, unleſs the Artery after the firſt Impreſſion on the Finger ſenſibly urges forward, and ſtrikes deep into the Fleſh; then it ſignifies a Critical Sweat in a few Hours at fartheſt.

IV.

But to conſtitute the Doctor's new-diſcovered Pulſe for a Critical Sweat, *two, three, or four conſequent Pulſations muſt riſe not only above the reſt, but alſo gradually, as they proceed, above each other, the ſecond above the firſt, and ſo on.* Four conſequent Pulſations of this kind is the moſt Dr. *Solano* has obſerved. He called this Pulſe the *Pulſus Inciduus*, from its Analogy to a Pulſe ſo named in *Heredia*, and may in *Engliſh* be termed the *Unequal Riſing Pulſe*, tho' I ſhall call it by the Name the Doctor was pleaſed to give it.

V.

This Pulſe the Author has always found ſoft, except once, when it appeared hard before a Critical *Jaundice* *; and this Motion towards the Surface of the Body is the only one diſtinct from Sweat, which Dr. *Solano* has obſerved conſequent to the *Pulſus Inciduus*.

* See *Sect.* II. *Ch.* IV.

VI. The

VI.

The *Pulſus Inciduus*, with a Softneſs in the Artery, is a certain Sign of a future Critical Sweat.

VII.

The Quantity of the enſuing Sweat is in a compound *Ratio* of the Number and Vigour of the *riſing* Strokes in the *Pulſus Inciduus*: Thus four conſecutive ſtrong Pulſations of this kind denote a very copious Sweat; two with the ſame Circumſtance of Vigour, a moderate one, and three with the like Force an abundant one. The other Combinations are equally obvious.

CHAP. IV.

Some general Remarks on the above-mentioned Signs and CRISES.

I.

DOctor *Solano* does not pretend, that all theſe *Criſes* are conſtantly preceded by the Signs above-mentioned, becauſe he has obſerved ſome without any ſuch previous Signs: But Caſes of this kind, he ſays, are few, except the Sweats which terminate the particular

particular Fits of Intermitting Fevers, which the *Pulſus Inciduus* does not commonly precede. He merely aſſerts, that when theſe Signs appear, the *Criſes* which they denote regularly follow; inſomuch that from the Year 1707 or 1708, in which he firſt obſerved the Connexion of theſe Pulſes with their *Criſes*, to the Year 1738, he remembered only three Caſes in which the *Criſes* ſignified by the Pulſe failed anſwering his Expectation. Two of theſe Caſes indicated bleeding at the Noſe: At the Time this failed in the one, a Pain or Heavineſs ſupervened in the Forehead, and the next Day ſucceeded a *Delirium*, which laſted above a Month; however, the Patient recovered. The other, more unfortunate, was, on the Failure of the Hemorrhage, afflicted with a Pain in his Left Temple, and died in ſeven Days after, evacuating a great Quantity of purulent Matter by the Noſe. The third Caſe denoted a *Diarrhœa*, the Failure of which was attended with a violent Griping, Hiccup and Vomiting, whereof the Patient died in four Days.

II.

Nature ſometimes ſubſtitutes a new Criſis to that which was firſt denoted by the Pulſe, and then the preceding Sign is changed into that which belongs to the ſuccedaneous Criſis.

III. Some-

III.

Sometimes while the firſt Sign obſerved in the Pulſe ſubſiſts, a ſecond, nay a third ſupervenes, and they continue together; then the two or three *Criſes* thereby ſpecified follow each according to the Rules above-mentioned.

IV.

Doctor *Solano* has found by frequent Obſervation, that when the Blood in the Hemorrhage of the Noſe is of a pale-red Colour, and ſmall in Quantity, the Patients recover ſlowly, and very ſlowly when with the ſame Colour the Hemorrhage is abundant.

V.

The Succeſs of the *Criſes* indicated by the Pulſe, and the determined Hour in which they are to happen, with ſome concomitant Circumſtances, can be foretold with a tolerable Certainty. But as what Dr. *Solano* has thereon is derived from the Ancients, I paſs it over in Silence.

Nota, Dr. *Solano* ſeems here to neglect that Circumſtance of the Succeſs of *Criſes*, which conſiſts in the Quantity of the Critical Evacuation ſo much taken Notice of by the Ancients.

VI. The

VI.

The Doctor has conſtantly obſerved, that all ſuch *Criſes* as were analogous to the Nature of the Diſtemper, according to the Rules delivered on this Head by the Ancients, proved favourable, except the Strength neceſſary to perform and undergo the Criſis was wanting.

VII.

Under an extreme Weakneſs the Patient may die before the Criſis can be performed; and ſuch a Caſe, if it ſhould happen, cannot affect the Truth of the Doctor's Obſervations.

Such are the Rules for the Prognoſtication of *Criſes* by the Pulſe, deduced by Dr. *Solano* from a long Courſe of Obſervation. That he was really ſupported therein by a great Number of authentic and extraordinary Facts, will appear beyond all Doubt in the following Pages. But, convinced from my own Experience that his Inferences are too large and extenſive, I deliver this Syſtem of Prognoſtication merely as an Hiſtorian, that it may plainly appear hereafter how far the Doctor has ſucceeded, and how far he has been miſtaken. However, it muſt be acknowledged, he practiſed in Places where a temperate Diet, an uniform Courſe of Life, and an excellent Climate concur to render Diſtempers more ſimple, and their *Criſes* more regular than they

they are found to be under the contrary Circumſtances; and what Allowances may be made the Doctor on this Account, I leave to the Judgment of the Judicious and Unprejudiced. Be the Fate of his Rules of Prognoſtication what it will, the Facts alleged by him are of a quite different Nature, prior to, and independent of the Conſequences he drew from them, and cannot be affected by any Miſtake in his ſubſequent Reaſoning. The Subſtance of his Obſervations, to which I now proceed, ſtill remains in its full Force and Authenticneſs; and I dare ſay is ſuch as muſt naturally excite our Curioſity, fix our Attention, and urge us to a farther Purſuit of this Matter.

SEC-

SECTION II.

Facts by which the Reality of Doctor Solano's *Obſervations, concerning the Prognoſtication of* Criſes *by the Pulſe, is in general aſcertained.*

IT would prove an endleſs Task to ſet down all the Obſervations made by the Doctor on this Matter, ſince the Year 1707 or 1708, in which he firſt obſerved it, to the Year 1738, in which he died. It may be eaſily judged how inexhauſtible this Subject is, by the following Paragraph of a Letter he wrote to a Friend in *Cadiz* in the Year 1735. ---"I ſhould never make an End, did I undertake to give a Detail of the Caſes I have obſerved *from the End of* June *to that of* September *laſt paſt:* The Hemorrhages by the Noſe, which I have prognoſticated by the *Rebounding Pulſe*, amount to more than Fifty; all have anſwered my Prognoſtication, and only the two above-mentioned proved mortal. The *Criſes* by Sweat I have foretold by the *Pulſus Inciduus* are ſeven or eight, and thoſe of Diarrhœas by the Intermitting Pulſe five."

From this Multiplicity of Facts, the Habit of foretelling *Criſes* became at laſt ſo familiar

to

to the Doctor, and the Encouragement he met with from his indolent Countrymen, except a glorious, but empty Reputation, was ſo little, that he generally neglected to take Notes of the Facts he obſerved, until ſome particular Incidents from time to time awakened his Attention, and excited his Diligence.

In what the Doctor has publiſhed on this Matter he gives a particular Account of Twenty-four Caſes; and in the Letters he wrote to me after my Departure from *Antequera*, in the End of the Year 1737, and in the Beginning of 38, he mentioned Thirteen new Obſervations. The Caſes communicated to him, (by others, who had obſerved them) whilſt I was in *Antequera*, were Eleven; and thoſe I have from my Friends, amount to Nine; the Whole (abſtracting from my own Obſervations, of which I ſhall ſpeak hereafter) makes Fifty-ſeven Caſes: Even theſe it would be too tedious to relate. I ſhall therefore ſelect from them ſuch as may beſt eſtabliſh the Truth and Authenticneſs of the Doctor's Obſervations in general. To this Purpoſe, I ſhall among the reſt fix on ſome Facts witneſſed by indifferent Perſons, and ſome atteſted and ſworn to by his very Rivals in Practice, and publiſhed with their Conſent.

In the Hiſtory of theſe Obſervations, I ſhall *retain* ſeveral Incidents and Hints of the original

ginal Writers, which indeed are foreign to the main Purpoſe; but as they naturally ariſe from the Circumſtances of the Facts, and manifeſtly bear the Character of a ſimple unaffected Narration, they cannot be omitted without ſtripping the Facts themſelves of that Share of Weight and Authority which they derive from the Candor of the Obſervers.

Such Obſervations as are now publiſhed for the firſt Time, are diſtinguiſhed from the reſt by an Aſterisk.

CHAPTER I.

Inſtances of the Prognoſtication of Critical Hemorrhages by the Noſe.

* OBSERVATION I.

Extracted from a Certificate of Don Joſeph Vincente Gomez, *Phyſician in* Antequera.

I Attended (ſays the Doctor) *Juan Romero* of *Antequera*, in *Calle Gavilanes* (a Street ſo called) in a Burning Fever, accompanied with fainting Fits, and other dangerous Symptoms. The Patient was a Man of the Age of Twenty-ſix, of a lively Diſpoſition, and of a hot elaſtic Conſtitution. After Blood-letting, and other Remedies, the fifth

Day I obſerved the *Rebounding Pulſe*; whereupon, guided by Dr. *Solano*'s Obſervations, I prognoſticated to the Patient a Hemorrhage by the Noſe, *but in the Space of two Days only, becauſe the* Rebounding *of the Pulſe was not continual* † (at what Number of Pulſations it recurred, the Doctor does not mention); and in the mean time I ſuſpended the Uſe of all Remedies. The ſame Pulſe continued next Day; and at the third Day's Morning Viſit, the Patient informed me, that on the preceding Night *he bled at the Noſe* to the Quantity of half a Pint; I found his Pulſe natural, and the Diſtemper, according to the ancient Expreſſion, perfectly *judged*.

* Observation II.

In the Year 1736, *Don Juan Pardo*, Son to *Don Juan Pardo*, a Gentleman of Diſtinction, and *Regidor* ‡ of the City of *Antequera*, laboured under a continual Tertian Fever: He was attended by Dr. *Don Franciſco Criado y Balboa*, Honorary Phyſician to the King's Family, who, finding all the Remedies he applied ineffectual, had Dr. *Solano* call'd to Conſultation, in which a new Bleeding was adviſed by the former, but oppoſed by the latter, who conſented it ſhould be next Day, in caſe a Hemorrhage by the Noſe, which he expected from the *Continual Rebounding* of the Pulſe,

† See *p.* 2. *n.* 2. ‡ A Magiſtrate.

did

did not appear in the mean time. For farther Satisfaction, both immediately returning to examine the Patient, obſerved an *Intermiſſion of one Pulſation* complicated with the *Rebounding Pulſe*, and recurring *at every ſecond or third Diaſtole*, whereon Dr. †*Solano*, *beſides the Hemorrhage*, prognoſticated *an imminent Diarrhœa*, which enſued about Twelve of the Clock the ſame Day, and the Hemorrhage about Eight at Night; from that Time the Patient grew better.

" The Truth of this Obſervation was con-
" firmed to me by the Patient, his Parents
" and whole Family, when I was in *Ante-*
" *quera*, and alſo by *Don Antonio de Heredia*
" *y Bazan, Corrigidor* of that City, (that
" is, ſupreme Magiſtrate both in Civil and
" Military Affairs) a Gentleman of noted
" Worth and Curioſity, who hearing of this
" Caſe, went immediately, at Eleven o'Clock
" the ſame Night, to the Patient's Houſe, to
" ſatisfy himſelf of the Truth thereof."

Observation III.

Dr. *Don Antonio Alvarez* of *Antequera*, in a Certificate he delivered to Dr. *Solano*, among ſeveral other Caſes, relates one, in which having obſerved the *Rebounding Pulſe*, he deferred a Bleeding that he thought, otherwiſe,

† See *p.* 11. *n.* 3.

completely indicated. At his Return next Day, with a Reſolution to have the Patient blooded, the Doctor was ſurpriſed to hear he was gone Abroad; and inquiring into the Cauſe of ſo unexpected an Event, the Family informed him, " that the Patient continued " in the ſame Reſtleſsneſs and Anxiety in " which he had left him, till the Morning, " at which Time the Anxiety augmenting, " he grew delirious, *and all of a ſudden bled* " *at the Noſe*; after which he fell into a " ſound Sleep, and awaking in good Heath, " dreſſed, and went out on an important " Affair." The Doctor expreſſed his Satisfaction, that he had deferred the Bleeding, which might have prevented ſo happy a Criſis.

The Certificate from which this Obſervation is extracted, was ſworn to by Dr. *Alvarez*, and publiſhed with his Conſent.

Observation IV.

In the Year 1736, Dr. *Solano* was called to viſit *Manuel Mercado*, a young, ſtrong, laborious Man, of an aduſt Conſtitution, an Inhabitant of *Antequera*, in the Street named *Calle del Raſtro*; it was then the ſixth Day of a Spotted Fever, the Patient's Thirſt was inſatiable, the Heat on the Surface of the Body intolerable, whilſt it ſcarce affected the interior Parts, and the Pulſe without any extra-

ordinary Celerity, low and *Rebounding*. From this laſt Circumſtance the Doctor intimated to the Patient's Family an *impending Hemorrhage*; but judging it would prove pernicious in a Diſtemper of this Nature*, he employ'd in vain all the Methods he could think of to prevent it; *the Blood flowed from the Noſe at three different Times*, and was at each Time *foretold by the Doctor* to the Family: Upon this repeated Hemorrhage the Patient grew weaker and worſe, and died in a few Days after of a *Diarrhœa*, alſo *foretold by the Doctor*, but which he neither could prevent nor moderate, nor the Patient bear.

Observation V.

In the ſame Year *Juan Delgado*, about the Age of Thirty, of a dry hot Conſtitution, fell into a Continual Tertian Fever which affected the Head. On the ſecond Day (whether of the Diſtemper, or of the Attendance, is not expreſſed) Dr. *Solano* having obſerved in him the *Rebounding Pulſe, with the ſecond Stroke ſtrong and quick upon the firſt* †, prognoſticated to him an abundant *Hemorrhage of the Noſe in twelve Hours Time*, which happened accordingly. Each of the three following Days he repeated the ſame Prognoſtic on the like Foundation, and with the like Succeſs, to the great Aſtoniſhment of the whole Fa-

* See *p.* 12. *n.* 6. † See *p.* 3. *n.* 4.

mily: But at laſt the Doctor, judging this Evacuation exceſſive, with much Difficulty prevented its Continuance, and the Patient quickly recovered.

" This Caſe, which was a four Days con-
" ſtant Wonder, became famous in the Neigh-
" bourhood, and was atteſted to me by the
" Patient's Family, when I was in *Antequera*."

*Observation VI.

Extracted from a Certificate of Doctor Don Miguel de Porras.

I *Don Miguel de Porras*, Doctor of Phyſic, and Inhabitant of this City of *Antequera*, do certify, that laſt Year 1736, my Brother *Don Rodrigo de Porras*, a Lad of a hot robuſt Conſtitution, having fallen into a Continual Double-tertian Fever, on the Apprehenſion of ſome Danger, I had Dr. *Don Franciſco Solano de Luque* called into Conſultation on the fourth Day. After taking ſuch Meaſures as appeared *proper*, the Doctor continued his Viſits, and on the ſeventh Day in the Morning, on feeling the Pulſe, he deſired my Aunts and Siſters, who were preſent, *to give the Patient a white Handkerchief to blow his Noſe with, becauſe he expected by the* Rebounding *of the Pulſe a Hemorrhage from that Part.* I was not then at home, but returning two Hours after, and inquiring how

my

my Brother was, and whether the Doctor had been with him, my Aunts and Sisters told me what happened; to which I answered, Well, we shall see! In about an Hour and a half, as my Brother was blowing his Nose, *the Blood burst out* in such a Quantity that it stained all the Handkerchief. He immediately called up the Family; we went to him, and were Witnesses of the Truth of Dr. *Solano*'s Prognostication. In Testimony whereof, I have signed this present Certificate, *Antequera*, the 9th of *October* 1737.

Don Miguel de Porras.

* Observation VII.

Extracted from a Letter to Dr. Solano.

I Dr. *Don Pedro Castan*, titulary Physician to the Town of *Casa-Vermeja*, Doctor of the University of *Gandia*, and approved of by the Royal *Proto-medicato*, do certify, that upon the 12th of *December* 1735, I was called to visit *Antonio de Luque* of the Age of Forty-one, and then the fourth Day dangerously labouring under a Synochal Fever. After Purging, repeated Blood-letting, and various other Remedies, my Patient grew daily worse, and I despaired of his Recovery. The twentieth Day of the Distemper I met his Brother *Fray Augustin de Luque* all in Tears at the Door, who told me he would have a Consultation

called; whereupon examining the Patient, whose Pulse beat very vehement and quick, and seemed to *rebound*, I answered, it was too late; for before a Physician could come, his Brother would die. He then pressed me to prescribe for him what I judged most convenient; but recollecting the Passage I had read a few Days before in the *Lapis Lydius* about the *Rebounding* Pulse, I determined to keep the Patient simply to his Broth, and wait the Event. I made my Visit next Morning by the Break of Day, and observing the same Vehemence and Frequency of Pulse, with a *more evident Rebounding* than the Day before, *I immediately declared* to the Family, *that I expected a Hemorrhage by the Nose in less than two Hours*, and charged them not to apply any Remedy to the Patient, till I returned. I went back in three Hours after, *and found him shedding a Quantity of Blood*, which the Sheets could scarce imbibe. The Hemorrhage lasted for the Space of two Hours, in which time I frequently examined his Pulse, and observed the *Rebounding* of the Artery to decrease by Degrees, and at last entirely disappear†. Then I took Leave of the Patient, told him all Danger was over, and in a few Days he recovered. He still lives in this Town with his Family. I have observed other Cases of the same Kind, with the like happy Success, in Burning Fevers, which

† *P.* 4. *n.* 6.

seemed

ſeemed complicated with Pleuritic Pains, of which, if you think proper, I will ſend you an exact Account. And in Teſtimony of the Truth of the above-mentioned Caſes, I ſwear and ſign thereto, in this my Study, at *Caſa-Vermeja*, this 11th Day of *October* 1737.

Don Pedro Caſtan.

CHAP. II.

Inſtances of the Prognoſtication of Critical Diarrhœas.

OBSERVATIONS I. II. III.

A Certificate of Dr. Don F. T. de Sayas.

I *Don Franciſco Thomas de Sayas*, Honorary Phyſician to the King our Sovereign, in his Royal Family, *&c.* do certify, That having theſe ſeveral Years paſt been called to various Conſultations with the Doctors *Don Rodrigo Parilla y Villalon*, and *Don Franciſco Solano de Luque*, have been Witneſs to many of the Criſes related in this Book *, and prognoſticated by *Don Franciſco Solano de Luque*; among which the following Caſe, in the Perſon of *Don Geronymo Goni y Avendano*, *Corrigidor* of this City, we three then preſent, was very ſurpriſing.

* *The* Lapis Lydius.

Having,

Having, all of us, obſerved in this Gentleman an unequal, *Intermitting*, inordinate Pulſe, *Don Franciſco Solano de Luque* ſaid, *the next Morning early the Patient would feel a great Uneaſineſs, with ſuch an Alteration in his Body, that the Attendants would judge him in the Agonies of Death, but that all this Tumult would be allayed by three or four Stools.* Dr. *Villalon* and I then gave no Credit to this Prognoſtication, attributing the Diſorder of the Pulſe to Cauſes quite different from that which Dr. *Solano* ſuggeſted: But we were ſtrangely aſtoniſhed at the Completion of it; for *at the prefixed Time, ſuch was the Anxiety of the Patient, that the whole Family was alarmed, and thought him really dying; yet having ſoon had three or four Stools, he almoſt entirely recovered.* The ſame happened next Day, tho' later, in leſs Quantity, and without any Uneaſineſs, juſt as Dr. *Solano* had alſo prognoſticated.

I moreover certify, That having obſerved in *Fray Luis de Cuenca*, of the *Franciſcan* Order, in the Convent of St. *Mary Magdalen*, of this City, an unequal *Intermitting* Pulſe in the Exacerbation of a Fever, *Don Franciſco Solano de Luque* abruptly ſaid, *the Patient had no Occaſion for any Remedy; for that after Midnight the Fever would terminate by an abundant* Diarrhœa, which hap-

happened *as the Doctor foretold*; and we all ſaw the Patient next Day in perfect Health. At this Prognoſtication were preſent Dr. *Don Antonio Alvarez*, myſelf, and ſeveral reputable Men of the above-mentioned Order.

I alſo certify, That in Preſence of the ſame Perſons viſiting *Fray Franciſco Diaz*, Guardian of the ſaid Convent, who lay ſick of a Fever and great Uneaſineſs, with an *Intermitting Pulſe* recurring *at the ſecond and third Pulſation*, I told *Don Franciſco Solano, that if in this Patient his Prediction was verified, I ſhould acknowledge myſelf fully convinced of the Certainty of his Obſervations.* He accepted the Propoſal, and told us, *the Patient would very ſoon have a moſt violent Commotion in the Belly.* Within two Hours the Patient felt *ſuch a vehement Tumult and Rumbling in the Inteſtines, with an Eruption of Wind ſo exceſſive, that he thought he ſhould expel his very Bowels*; to this ſucceeded a *fæcal Stool, after which the Patient grew eaſy.* The next Morning Dr. *Solano*, perceiving ſome Remains of *Intermiſſion* in the Pulſe §, ordered a Clyſter, to facilitate the Motion of the Belly: This was followed by a laudable Evacuation, whereon the *Intermiſſion* of the Pulſe and Fever ceaſed, which equally ſurpriſed me, the Guardian, *Fray Miguel Garzia* Surgeon to the Order, and a great many others.

§ *P.* 4. *n.* 7.

As

As to the other Species of *Criſes* prognoſticated by Dr. *Don Franciſco Solano de Luque*, Hemorrhages by the Noſe, and Sweats, I *ſwear, That tho' I was not preſent at thoſe Prognoſtications, yet I have heard them atteſted by Perſons of an unexceptionable Character, to ſome of whom the very Facts happened, ſome were Witneſſes to them in others; for which Reaſon, and from my own private Conviction of the Certainty of the Prognoſtications I have ſeen, I do not in the leaſt doubt of this Matter: Therefore I ſwear, and ſign to it.

Don Franciſco Thomas de Sayas.

*Observation IV.

From a Certificate of Doctor Don Miguel de Porras.

—— I alſo certify, that *Dona Maria Joſepha de Saavedra*, an old Lady, of a cachectic Habit of Body, with Obſtructions, labouring under ſome Cares and Uneaſineſs of Mind, having from a Hypochondriac Affection fallen into a malignant Fever, with a Vomiting up of all Nouriſhment and Remedies, a Suppreſſion of Urine, and Aſtriction of the Belly, was firſt attended by Dr. *Don Antonio Alva-*

* *Juro*, a Form of ſolemn Affirmation in the *Spaniſh* Idiom.

rez,

rez, who after ſome Days had the Drs. *Don Franciſco Solano de Luque*, and *Don Franciſco Criado*, called to Conſultation. They all agreed the Diſtemper was mortal, and Dr. *Solano* by the *Intermitting Pulſe* prognoſticated in Preſence of *Don Pedro Vorrego*, his Mother, Siſters, and the whole Family, *that the Patient would have the Night following two or three large Stools*, which accordingly happened between Eight and Nine o'Clock that Night, as I was aſſured by all the abovementioned Perſons. Two Days after, in the Evening, I called to ſee the Patient; and finding an *Intermiſſion* in the Pulſe, *between every third and fourth Pulſation* †, I prognoſticated in the Preſence of the ſame Perſons, *a Looſeneſs for the next Day*; whereon they told me the Event of Dr. *Solano*'s Prognoſtication two Days before, which confirmed me in mine. The next Morning the Patient had *two large Stools, and voided a Worm of a Quarter of a Yard long*. In Teſtimony whereof, I have ſigned this preſent Certificate, *Antequera*, the 9th of *October* 1737.

Don Miguel de Porras.

* Observations V. VI. VII.

From a Certificate of Dr. Don V. Gomez.

I *Don Vincente Gomez*, Doctor of Phyſic, Native and Inhabitant of this City of *Ante-*

† See *p.* 2. *n.* 2.

quera,

quera, do certify, That in my Attendance on *Alonſo Duran*, who lay ſick in the *Cruz Blanca*, of a Burning Fever, after the Uſe of proper Remedies, the ninth Day I obſerved a regular *Intermiſſion* in the Pulſe; as I felt it with an extraordinary Attention, *Fray Franciſco de St. Nicolas*, a *Trinitarian*, who happened to be then preſent, ſaid, *Doctor, You ſeem to apprehend the Patient is in Danger: I really do, tho' no Phyſician; for his Pulſe ſtops.* I anſwered, *I both felt the* Intermiſſion, *and foreſaw the Danger; that the former was a mortal Sign, and all farther Application of Remedies uſeleſs.* However, I returned next Day to ſee the Patient, and found the *Intermiſſion more manifeſt, and more frequent*†, and thus it continued till the Day following; then a *Diarrhœa ſupervened, whereon the* Intermiſſion *diſappeared* §, *and the Patient was relieved.* He ſoon after perfectly recovered by a Critical Abſceſs of one of the Parotids.

* I moreover certify, that *Dona Franciſca de Valenzuela*, a Lady of the Age of Seventy, in a Double-tertian Continual Fever, having been deſpaired of by a Phyſician of this City, her Son *Don Antonio del Campo* preſſed me to viſit her, which I with ſome Reluctance conſented to; and finding her in a Lethargy, with

† See *p.* 2. *n.* 2. § *P.* 4. *n.* 6.

an

an *Intermitting* weak and low Pulſe, I confirmed the other Phyſician's Prognoſtic, and refuſed to preſcribe; but overcome by the Importunity of *Fray Juan Vilchez*, I ordered her ſome Digeſtives, Stomachics and Cephalics. The *Intermiſſion* continued, and a *ſymptomatical* † *Diarrhœa* ſupervened, which was carrying off the Patient; but by the Addition of ſome Aſtringents to the above-mentioned Remedies, the Looſeneſs and Fever ceaſed, the *Intermiſſion* diſappeared, an imminent Apoplexy was prevented, and the Patient recovered, to the great Surprize of all the Attendants.

* The ſame § Patient's Mother was taken with a Double-tertian Fever, which gave me

† Tho' the Doctor calls this a *Symptomatical Diarrhœa*, it really appears to have been in all Rigour Critical: For an Evacuation the moſt exquiſitely calculated to remove the Cauſe of a Diſtemper, may become pernicious by an accidental Coincidence with an extreme Weakneſs, which cannot admit of any large Subtraction of Fluids, without a total Relaxation and *Collapſus* of the Veſſels. Such was the Caſe in the preceding Obſervation. The Criſis was performed, the Doctor happily preſerved the proper Balance between the Quantity of the Evacuation, and the Strength of the Patient; he thereby maintained her fleeting Spirits, and the morbid Cauſe being removed by the Criſis, ſhe quickly gathered Strength, and recovered. This, I ſay, muſt have been the Caſe; whereas it is evident, that a few Aſtringents, to which the Doctor attributes the Cure, are Medicines neither adapted to the Cauſe, or proportioned to the Violence, of the Diſtemper here mentioned.

§ *Juan Romero*, whoſe Caſe, in the Certificate, immediately preceded the preſent Obſervation, and is transferred to the Chapter on Hemorrhages.

no leſs Uneaſineſs than that of her Son, becauſe of her Age, which was Sixty-ſix, and of the great Violence of the Symptoms. I obſerved her Pulſe to *intermit* at the *ſeventh and eighth Pulſation* †; wherefore I abſtained from all Remedies, and expected a Critical *Diarrhœa*, according to Dr. *Solano's* Obſervations. The *Intermiſſion* continued for three Days, and then ceaſed, without the leaſt Appearance of a *Diarrhœa* §; whereon inquiring into the Patient's *Regimen*, I found that on the Days above-mentioned ſhe eat boyled Quinces, and had applied to the Stomach and *Abdomen* a Poultis of Quinces, Wormwood and Bacon. Having thus diſcovered the Cauſe whence the Detention of the *Diarrhœa* proceeded, I immediately ordered thoſe Remedies to be removed, the Patient's Diet to be changed, and to the Aſtringents ſubſtituted inciding, attenuating, and laxative Medicines, to counterbalance the condenſing Effect of the former. The Humours being thereby thinned, and the Solids reduced to their former Laxity, the *Intermiſſion* of the Pulſe *appeared again, and in Twenty-four Hours after, the Diarrhœa, which in ſome meaſure relieved the Patient*; but finding this was not a complete Criſis, I ordered her a ſlight Decoction of *Tamarinds*, by which ſhe had two moderate Stools. Notwithſtanding all my Care, ſhe grew worſe by Degrees, and at laſt died.

† *P.* 2. *n.* 2. § *P.* 2. *n.* 3.

The

The above-mentioned Caſes I have obſerved, and becauſe they are true, I have ſigned, (*Antequera, October* the 6th 1737.)

Don Joſeph Vincente Gomez.]

CHAP. III.

Inſtances of the Prognoſtication of Critical Sweats.

* OBSERVATION I.

Communicated by Doctor Gomez.

FRanciſco Ignacio, who lives in the *Hoya*, fell ill of a Double-tertian Continual Fever, attended with great Laſſitude and Anxiety. The ſixth Day I obſerved in him the *Pulſus Inciduus at every third and fourth Pulſation* †; wherefore in Expectation of a Critical Sweat, I ſuſpended the Uſe of all Medicines, and accordingly *at the End of the ſeventh Day ſupervened an abundant Sweat*, by which the Diſtemper was happily terminated. *Antequera, October* the 6th 1737.

Don Joſeph Vincente Gomez.

† See *p.* 2. *n.* 2.

Observation II.

From Dr. Solano.

Fray Cecilio Garzia, Superior of the *Franciſcan* Convent of *Lora*, being ſick of a Continual Fever, I prognoſticated to him *a Critical Sweat* at a determined Hour next Day; in Conſequence of which, I, with great Difficulty, and by inſiſting on the Certainty of my Prognoſtication in the Preſence of the whole Convent, prevailed on the Phyſician in Ordinary *Don Antonio de Pontes* to delay a Bleeding he had ordered the Patient. About the prefix'd Hour, in the Preſence of the ſaid Phyſician, the Patient felt a very diſorderly Uneaſineſs, and *an abundant Sweat enſued*, by which the Uneaſineſs and Fever were carried off.

Observation III.

From the Same.

Don Alonzo de Godoy y Roxas, perpetual *Regidor* of the City of *Antequera*, after an Indiſpoſition, relapſed into a continual Fever, which became ſo violent, that the fourth Day I was called to Conſultation. The other Phyſicians *Don Franciſco Thomas de Sayas*, and *Don Antonio Alvarez*, propoſed to bleed the Patient; but having perceiv'd *ſome ſlight*

Strokes

Strokes of the Pulſus Inciduus, and thereby foreſeeing a Criſis by Sweat, I prevailed with them, *in Favour of the fourth Day*, to defer the Bleeding. In the Evening I obſerved the *Pulſus Inciduus more evident*, and the *red Cloud*, mentioned by *Hippocrates* *, in the Urine; whereupon I more firmly oppoſed the Bleeding, and prognoſticated *a Critical Sweat on the ſeventh Day*. This Interval of Time, tho' the Patient had ſome Changes, was ſpent without any farther Preſcription, and the *ſeventh Day* ſupervened *two abundant Sweats*, which entirely removed the Diſtemper.

Observation IV.

From the Same.

Fray Alexandro de Paz, of the *Franciſcan* Order, in his Way to *Illora*, was taken with a Continual Fever, ſomewhat of the Nature of a Tertian, the Violence of which gave him great Uneaſineſs. One Afternoon, perceiving the *Pulſus Inciduus*, I prognoſticated to him *a copious Sweat at nine o'Clock that Night*, by which he would recover. He was ſurpriſed at my Prediction, not only becauſe it appeared new to him, but alſo becauſe he could never, either by Sudorificks or by Exerciſe, be forced into a Sweat, and therefore did not give Credit to it; particularly the De-

* *Aph.* 71. *S.* 4.

termination of the Hour very much puzzled him: At laſt, about Nine, he grew anxious, began to rave, *ſweated abundantly*, and in a ſhort time perfectly recovered.

OBSERVATION V.

From the Same.

Fray Juan Gomez, now Guardian of the *Magdalen* Convent of *Antequera*, fell ill on a *Monday* Morning, of a very acute Fever; on *Thurſday*, the fourth of the Diſtemper, I perceived in him the *Pulſus Inciduus*, and prognoſticated, in the Preſence of the whole Convent, *an abundant Critical Sweat on* Sunday *Morning*, *preceded by great Anxiety*, and foretold him he would be cured by it. As I felt his Pulſe next Day, I repeated the ſame Prediction to him, and obſerving the Artery *to rebound* ſlightly *, told him he would that very Day *ſhed ſome Drops of Blood from the Noſe*, which he did at Eleven o'Clock. In the Evening I prognoſticated to him ſuch another Hemorrhage that Night, which alſo happened. *Saturday* Morning, finding a ſmall *Intermiſſion* in the Pulſe, *about the third and fourth Pulſation* †, I foretold him *an eaſy Motion of the Belly at Noon*, about which time *he had a Stool, and with it expelled a Worm of a quarter of a Yard long*. *Sunday* Morn-

* See *p.* 11. *n.* 3. † See *p.* 2. *n.* 2.

ing

ing early, he was taken with *great Anxiety, Jactation, Nauseating, Raving, Trembling, and remarkable cold Fits.* I found him in this Situation, and was at some Trouble in removing the Apprehensions of the Patient and Attendants, who judged him *in the Agonies of Death*: Thus he continued for a quarter of an Hour, after which he began *to sweat* with such a *Stench*, that the Monks were obliged to change all his Bed-cloaths, and perfume the whole Convent; and the Patient perfectly recovered.

*Observation VI.

Extracted from a Letter written to Dr. Solano *by* Don Pedro Joseph Marin de Aparicio, Visitor-General *of the Tabaco Rents in* Malaga.

. . . . . On which I proceed to the Fact: *Don Alonzo de Sevilla*, belonging to my Division, falling ill a few Days since, his Physician *Don Nicolas Rexano* characterized his Distemper a Double-tertian Ague, which after six Bleedings became a continual Fever. On this I called to see the Patient on the *eleventh Day* of his Illness, accompanied by *Don Antonio Manzo*, Lieutenant, and *Don Jacinto Marsil*, Secretary of the Tabaco Rents; and tho' I acknowledge my Incapacity in *Medicine*, yet I thought proper to

examine the Pulſe of the Patient according to the Rules delivered in your (not ſufficiently celebrated) Book. At the *thirtieth or thirty-firſt* Pulſation, I obſerved *a Suſpenſion, Intermiſſion, or ſomething elſe I could not characterize*, for want of a thorough Knowledge in this Affair; for which Reaſon I deſired *Don Antonio Manzo*, who has read part of your Works with the ſame Pleaſure that I have, to feel the Pulſe of the Patient, and examine the above-mentioned Number of Pulſations, which he did, and found at the *thirty-third* Pulſation *the ſame extraordinary Motion* I had obſerved; on which, *guided by your Rules* *, *we both judged a Criſis would enſue on the fourteenth Day, without venturing to determine what kind of Criſis.* In an Hour after, we, the above-mentioned, met the Phyſician, who told us the Patient was dangerouſly ill, that he thought convenient to bliſter him, and order a new Bleeding, and would have Dr. *Don Raphael de Fuentes* called to Conſultation. In Pity to the Patient, I modeſtly told him what I had obſerved, with my Judgment thereon, and prayed him to examine the Matter ſeriouſly, before he ventured upon the Bleeding he propoſed. I had the Conſultation called, but could not go to it: At Seven in the Evening I met *Don Raphael de Fuentes* in the Adminiſtrator-General's Houſe, where in Preſence

* See p. 2. n. 2.

of

of that Gentleman, his Family, and the above-mentioned *Don Antonio Manzo*, he declared the dangerous State of the Patient; and being asked by me, whether he found in the Pulſe what I had obſerved? he anſwered, the ſame, but *more frequent, recurring at the three or four and twentieth Pulſation* *; that it was not the *Intermitting Pulſe*, as I imagined, but *the Inciduus*, and that he thereon cautioned *Don Nicolas Rexano* againſt bleeding the Patient in ſuch Circumſtances. However, to my great Diſſatisfaction, the Doctor got him blooded in the Hepatick Vein; but notwithſtanding this Miſmanagement, and the conſequent Diminution of Strength, ſo ſteady and powerful was the Tendency of victorious Nature, that on the thirteenth Night ſhe broke out into *a hot copious Sweat*, which laſted till next Day, and left the Patient free from his Fever, as *Don Nicolas Rexano* confeſſed to me in the Preſence of *Don Jacinto Marſil.* This Caſe I thought proper to communicate to you, and if you judge it convenient, will ſend it you legally teſtified by publick Authority. *Malaga, Sept.* 17. 1737.

Don Pedro Joſeph Marin de Aparicio.

" This Hiſtory, with ſome others of the " ſame Nature, was afterwards confirmed to " me by the Author of the foregoing Letter."

* See *p.* 2. *n.* 3.

By ſeveral of the foregoing Hiſtories it may be obſerved, that from the time Dr. *Solano* obſerved the Signs of a ſalutary Criſis, until it happened, his general Method was to forbear all ſuch Remedies as might in any reſpect divert the Tendencies of Nature.

CHAP. IV.

An Inſtance of the Prognoſtication of a Critical Jaundice *by the Pulſe, from Dr.* Solano.

DON *Bartholome de Sierra y Salvatierra*, Knight of the Order of St. *Jago*, by the Diſſatisfaction he conceived from a Squinting he was afflicted with, fell into an obſtinate Melancholy; and tho' he found ſome Relief in my Hands, he determined to ſeek farther Help in *Madrid*, and engaged me to accompany him thither in the Year 1721.

He was there under the Care of Dr. *Higgins* the King's Phyſician, and Dr. *Zapata* the moſt famous Practitioner in *Madrid*, attended by Monſieur *Le Gendre* the King's Surgeon. Dr. *Don Joſeph Zunol* Phyſician to the Prince of *Aſturias* was called in the room of Dr. *Higgins*, who could not regularly attend. The two other Phyſicians, after twenty Days fruitleſs Labour, propoſed to the Patient *Viper-*

Viper-broth, which I cauſed to be deferr'd on perceiving the *Pulſus Inciduus*, which recurred *about every twentieth Diaſtole* †, with *a remarkable Tenſion* of the Artery; and declared to the Family, there would happen a conſiderable Change in the Patient within the Space of Five Days. The Broth was ſtill warmly inſiſted on by the two before-mentioned Phyſicians with the Patient on one Side, and oppoſed by me on the other. In the mean time I obſerved the *Pulſus Inciduus to recur regularly between the ſeventh and eighth Pulſation* §, and conſequently foreſaw the *Criſis approaching*, which by the *Hardneſs* of the Pulſe, and ſome other Circumſtances of the Diſtemper, I then judged and openly prognoſticated would be a *Jaundice*; on which the Patient, who had more than once been a Witneſs to the Certainty of my Predictions, joined me in Oppoſition to the *Viper-broth*. From the third Night he felt a conſiderable Uneaſineſs and Change in himſelf, and in this Situation ſpent the remaining Time till the fourth Morning, on which he was obſerved *all yellow*, to the great Surprize of the Family. I order'd the Windows to be ſhut, and a Couple of Candles to be lighted in the Patient's Room. The Phyſicians came in one after the other: I asked each as he entered, whether *Viper-broth* could hurt an *Icterick* Perſon, or diſ-

† See *p.* 2. *n.* 2. § *Ibid. n.* 3.

turb

turb Nature in a Tendency to a *Jaundice*. The one anſwered, It was not proper in ſuch Caſes; and the other, That none but an Idiot would preſcribe it. Then they felt the Pulſe of the Patient, without obſerving the *Jaundice* by the Light of the Candle. I got the Windows ſuddenly opened, a full Day broke in, they ſaw the *Jaundice*, and ſeemed thunder-ſtruck.

This Obſervation was ſoon after publiſhed by Dr. *Solano*, without any Contradiction from Dr. *Zunol* or Dr. *Zapata*, who were too nearly concerned in the Caſe, not to take Advantage of the leaſt Miſrepreſentation.

CHAP. V.

Inſtances of like Obſervations from the Ancients.

TO the foregoing Hiſtories I ſhall add a very remarkable Caſe from *Proſper Alpinus, de præſagiendâ vitâ & morte*, L. 4. c. 4. a Caſe in which Dr. *Solano*'s Idea is ſo perfectly anticipated, in almoſt all its Circumſtances, that were I not certain he had no Knowledge thereof, before I ſhewed it to him, or even of the Author, I ſhould be perſuaded he had thence borrowed the firſt Hint towards his Obſervations. But ſo far was the Doctor

from

from any Acquaintance with this Paſſage, that when I ſhewed him the Caſe, the good grave Man ſkipped about the Room in an Ecſtaſy of Joy, and cried out, That had I made him King of *Spain*, I could not have given him a more ſenſible Pleaſure! In theſe Circumſtances, the Coincidence of *Proſper Alpinus*'s Obſervation with Dr. *Solano*'s Facts ſeems to form a deciſive Proof in favour of the Doctor's general Idea, as will evidently appear by the Obſervation itſelf, which runs in the following manner:

" ----*Quare ſenes atque pueri ex hoc pulſu*
" (intermittente *ſc.*) *non ita peſſimè ſe habent*
" *ut juvenes, in quibus plane exitioſos eſſe hos*
" *pulſus intermittentes voluit Galenus. Tamen*
" *etſi plerumque hoc verum experiatur, Baſ-*
" *ſani juvenem annos natam ſupra viginti,*
" *pleuriticam abhinc multos annos apud*
" *Hermetem Furcaturam juriſconſultum cla-*
" *riſſimum vidi, in quâ uſque ad diem quar-*
" *tam pulſus ita intermittebat, ut primâ die*
" *ſingulis ſeptem aut decem pulſibus intermit-*
" *teret ſpatio unius pulſationis, et ſecundâ*
" *ſingulis ſex aut quatuor, et tertiâ ſingulis*
" *tribus, et quartâ (quâ die morituram quiſ-*
" *que meritò judicâſſet) cùm delira prorſus*
" *eſſet, nihil expueret, difficillima reſpiratio,*
" *inquietiſſima, et cùm pulſus ſingulis pulſatis*
" *duabus pulſationibus ita intermiſerit, ut*
" *immobilis multo intervallo arteria maneret,*
" *pulſuſque*

" *pulſuſque ſubſequentes languidi exileſque*
" *eſſent, nihilominus præter omnium ſpem ſimul*
" *cum urinâ multâ materiâ craſſâ, pituitoſâ*
" *excretâ, nullâ aliâ obſervatâ evacuatione*
" *aut judicio facto, convaluit.* He adds,
" *Sed hujuſmodi caſus rarò fiunt, ſuntque in*
" *arte medendi veluti monſtra.*" But it is evident from the Obſervations of Dr. *Solano*, and from others which I have ſince made, that this Reflection of the Author is rather derived from the Authority of *Galen* than from Experience; and this is farther confirmed by the Reaſons they both ground this Opinion upon, which are merely ſpeculative. The Coincidence of the Fact itſelf with Dr. *Solano*'s Obſervations is ſo very ſtriking, that it may be at firſt Sight miſtaken for one of the Doctor's own Facts. However this Caſe ſeems in two Circumſtances to differ from the Doctor's Rules of Prognoſtication; for, 1ſt, *Proſper Alpinus* makes no mention of the *Softneſs* of the *Intermitting Pulſe*, tho' Dr. *Solano* delivers it as the Sign of a Criſis by Urine†. 2dly, *Proſper Alpinus* writes poſitively, that the Diſtemper was terminated by a ſimple *Flux* of *Urine*, whereas according to Dr. *Solano a conſiderable Diarrhœa* ſhould have been joined to it §. With reſpect to the firſt of thoſe Differences, it is to be obſerved, that the Silence of *Proſper Alpinus* does not abſolutely exclude the *Softneſs* of the Pulſe, nor indeed does the Diſtem-

† See *p. 6. n. 6.* § *P. 6. n. 4.*

per

per mentioned by him; ſince it is notorious, that under the Name of *Pleuriſies* ſeveral Diſtempers have been deſcribed, which were not genuine *Pleuriſies*; and to theſe laſt alone is the *Hardneſs* of the Pulſe eſſentially joined. The ſecond of the above-mentioned Differences is real and expreſs, and I will neither deny nor endeavour to elude it. Perhaps the Diſtinction between the Sign of a Critical *Diarrhœa* and that of a *Diſcharge by Urine*, is not ſo nice as Dr. *Solano* imagined; for, 1ſt, The *Intermitting Pulſe* is common to them both. 2dly, A Criſis by Urine may be eaſily joined with a *Diarrhœa*, and almoſt *imperceptibly* performed in the very Efforts of going to Stool. 3dly, Dr. *Solano* acknowledges he has never obſerved a Criſis by Urine alone, and conſequently could not determine whether it has any abſolute *univocal Sign*. This may the more reaſonably be doubted, becauſe theſe *Criſes* ſeem to be more eaſily convertible into each other than the reſt; for it is known by Obſervation †, that the Fluids contained in the *Rectum*, and lower Part of the *Colon*, may be abſorbed by the Bladder, and expelled with the Urine: Moreover, a ſmall Inequality of Reſiſtance in the Renal or Meſenterick Arteries may quickly *alter* the common Diſtribution of the Blood *thereto*, and reciprocally ſhift either to the Kidneys, or Inteſtines,

† *Baglivi* has an Inſtance of this.

the

the Evacuation of ſuch morbid Humours as flow with the Blood through the inferior *Aorta*.

Be theſe Conjectures as they will, it is plain Dr. *Solano* has not exhauſted this Matter, which is to be referred to farther Examination by Experience.

In the mean time we cannot, without a very ſenſible Pleaſure, ſee in the Caſe related by *Proſper Alpinus*, *the Periods of Intermiſſion gradually become ſhorter and more frequent, in proportion as the Criſis approaches*, juſt in the ſame manner as Dr. *Solano* has ſince obſerved ‖. It would be manifeſtly ridiculous, to attribute to blind Chance ſuch regular Operations of Nature, and *ſo uniform a Gradation of the Pulſe*, from the Beginning to the End of the Diſtemper. This Obſervation indeed remained mute, and lay neglected as a *lifeleſs fortuitous Monſter, a mere Luſus Naturæ*, for almoſt Two hundred Years; but now quickened by the Facts obſerved by Dr. *Solano*, it loudly proclaims, in Conjunction with them, the Critical Operations of Nature, and in its Turn imparts a new Degree of Evidence and Force to thoſe very Facts, from which it derives its Life and Meaning; while the joint Authority of all the above-mentioned Caſes aſcertains to Medicine a new Ray of Light, by which the latent Operations of

‖ See *p.* 2. *n.* 2 and 3.

Nature

Nature may be diſcovered, and *Criſes* more certainly foreſeen than they could hitherto be.

It is not to be doubted but that ſeveral ſuch Facts have frequently happened; but they have been either totally neglected, or (which in Effect is almoſt the ſame) imperfectly recorded, becauſe the Connexion between the above-mentioned Pulſes and their *Criſes* was never remarked, till Dr. *Solano* brought it to Light. Thus *Wierus* * relates an Obſervation, which he neither underſtood, nor ſufficiently expreſſed; tho' Perſons acquainted with Dr. *Solano*'s Facts will readily perceive its Tendency thro' the Obſcurity of the Deſcription. A Nobleman fell into what the Author calls a *malignant Fever*, which was from the Beginning attended with ſeveral evident Signs, a *Saburra of the Primæ Viæ*, *bilious Vomiting*, and *Eructations*, together with an *unequal Pulſe*. On the ſixth Day, the *Fæces alvinæ* were very *bilious* and *fetid*; the following Night brought on a *violent Exacerbation* of all the Symptoms; and the *ſeventh Day*, in the Morning, the Pulſe began to *intermit at every third Pulſation*. But notwithſtanding the Appearance of a Symptom ſo generally pronounced *mortal* by the Writers in Phyſick, *Wierus*, from the

* *Apud* Georg. Horſt. *Sen. Obſ. Med. Singular.* l. XI. Obſ. 8.

fa-

favourable State of all the other Signs, prognoſticated the Patient's Recovery; and obſerving him very uneaſy at the Stomach, and frequently *Puking*, he ordered him for the next Day, *viz.* the eighth, a Purge which abundantly wrought, and entirely relieved him. The *Intermiſſion* diſappeared on the ninth, and the Patient remained free from his Complaints.

Here we have no Account of the *Softneſs* or *Hardneſs* of the Pulſe with reſpect to the *Puking* on the ſeventh Day; no certain Knowledge of the *ſpontaneous Operation of Nature*, which is confounded with that of the Purge; no diſtinct Mention of the *Vomiting* and *Eructation* from the firſt Hint in the Beginning of the Fever until the *ſeventh Day*. Nevertheleſs, from what is clearly expreſſed in this Hiſtory, we may eaſily trace out a *remarkable Coincidence* of ſeveral Critical Circumſtances with the *Intermiſſion* of the Pulſe. This from the Beginning was *unequal*, under evident Signs of a *Saburra of the Primæ Viæ*; on the *ſixth Day* the morbid Matter began to move down by the *Anus*; the next Night brought on a general *Exacerbation* of the Symptoms, a *well-known preceding Circumſtance* of all conſiderable *Criſes*; on the *ſeventh*, the *grand Critical Day*, appeared the *Intermiſſion* of the Pulſe under a favourable Aſpect of the Diſtemper, at-

attended with a *Nauſea* and *Puking*, which ſeems to have been ſuſpended for ſome Days before; and laſtly, the *Intermiſſion* and the Diſorder were *jointly removed* by the Purge on the *eighth Day*. Theſe muſt be allowed very ſtrong Circumſtances in an Obſervation ſo imperfectly related; how many others of the ſame kind have been ſtill more maimed and disfigured, nay abſolutely neglected, it is impoſſible to conjecture; but certainly of thoſe that have been taken Notice of, ſuch alone have emerged out of the *Obſcurity of Deſcription*, as were very extraordinary, and, if I may repeat the Expreſſion made uſe of in the Preface, ſuch as by the mere Force of their Evidence broke thro' the Prejudices and Inadvertency of the Obſerver. The Fact related by *Alpinus* would, in all Appearance, have been loſt to Poſterity, had not the Nature of this Author's Subject directly led him to it: Perhaps not even this would have preſerved it to us, were not the Fact itſelf ſo very *remarkable* in all its Circumſtances. *Alpinus* ſeems to have almoſt loſt Sight of it; he pens it down from his Memory at ſeveral Years Diſtance, and heſitates about the *Periods of Pulſation* at which the *Intermiſſion* recurred. But now the Scene is opened to ſuch Advantage, and diſcloſes a Proſpect ſo uſeful to Mankind, a more active Spirit in examining and recording ſuch Caſes as ſhall occur on this *Subject* in our own Climates,

may be justly expected from the known Curiosity and Humanity of the *British* Physicians. It has indeed been long objected, nay it is still imagined, that the *Northern Climates* are incompatible with that regular Course of Distempers and *Crises* observed in *Greece* by *Hippocrates* and other *Ancients*. This Objection is probably deduced from *Aph.* 8. *Sect.* 3. But however true it may prove in some degree, there is very good Reason to think the Inference by much too extensive, whereas the contrary is insisted on from Matters of Fact, by Physicians of acknowleged Skill, and long Experience, as shall be seen in the Second Part of this Work, Sect. I. Chap. IV.

PART

PART the Second.

Containing Several New

OBSERVATIONS

ON

The ſame SUBJECT;

WITH

REMARKS on Dr. *Solano*'s Rules of Prognoſtication;

AND

Some General HINTS on the *Nature*, the *Ancient* Obſervance, and the *Modern* Neglect of CRISES.

By JAMES NIHELL, M.D.

PART the Second,

Containing Several New

OBSERVATIONS

ON

The Same SUBJECT;

WITH

Remarks on Dr. Colyer's Rules of Prognostication;

AND

Some General Hints on the Nature, the Danger, Chief Symptoms, and the Method of CURE

By JAMES NIHELL, M.D.

SECTION I.

CONTAINING

The Result of my own Observations on the Connexion observed by Dr. SOLANO *between the fore-mentioned* Pulses *and* Crises.

CHAPTER I.

The Result of my own Observations on the Rebounding Pulse.

OF 121 Persons, in whom I have observed the *Rebounding Pulse*, 7 only neither bled at the Nose, nor were affected with any Symptoms, which might be deemed a *Tendency to* a Hemorrhage of this Kind, or a *Consequence of its Failure*. It is to be observed, that of these 7 none then laboured under the Struggles of an acute Dis-

temper, nor under any conſiderable Effort of the Conſtitution, and that in two of them the *Rebounding* of the Pulſe was *irregular*.

The remaining 114 were all affected with ſome, and moſt with many of the following Symptoms; *Univerſal Head-aches, Heavineſs of the ſame Part, Giddineſs, Raving, Stupidity, comatous and lethargick Affections, Pains in the Forehead and Temples, in the Root and whole Extent of the Noſe, in the Ears and Eyes, ſometimes with a Twitching, Shooting and extraordinary Pulſation of the adjacent Arteries; Itching in the Noſe, Sneezing and Stuffing, as in a Coryza; Deafneſs, Noiſe in the Ears, a Flux of purulent or ichorous Matter from them.* Of all theſe Symptoms *ſuch as affected the Noſe* were the moſt common and remarkable.

Of this whole Number, *viz.* 114, 42 were merely affected with ſome or many of the Symptoms mentioned in the preceding Paragraph; 35 of theſe laſt *in a very remarkable Manner, nay ſome for a Fortnight, three Weeks, even an entire Month*, when the *Rebounding* laſted ſo long, and the Patients remained in the Hoſpital; of theſe 35, 9 had an *irregular obſcure Rebounding*: The remaining 7 of the 42 were more imperfectly affected with the above-mentioned Symptoms, and without an evident Correſpondence with the

the Pulſe, which in *two* of theſe laſt was moſtly *anomalous*.

The remaining 72 *all bled*, ſome in a moderate, ſome in a leſs, and ſome in a very ſmall Quantity. 7 of this Number bled with ſuch equivocal Circumſtances, that I cannot poſitively affirm, whether the Blood trickled from the poſterior Parts of the internal Tract of the Noſe into the *Fauces* and *Trachea*, as I have ſometimes obſerved, or ouzed out immediately from theſe laſt Parts: In *one* of theſe 7 the *Rebounding* of the Pulſe *was irregular*.

The remaining 65 *bled at the Noſe*, with the following Circumſtances.

Viz. 11 bled before they came under my Obſervation, ſome immediately, and ſome a few Days before; of this Number, *four* had only *an inconſtant Rebounding* in the Pulſe, and very ſlight Symptoms in the Head.

The remaining 54 bled in the Courſe of my Obſervation.

In *eight* of theſe, the Hemorrhage, and other attending Symptoms which affected the Head, *did not regularly correſpond with the Variations of the Pulſe*, *nor was* the Pulſe itſelf *regular* in *four* of them.

In 30 of the remaining 46, the Hemorrhage and Symptoms *bore a more exact Correſpondence with the Rebounding* of the Pulſe *all the Time this laſted.* The Pulſe in *ſix* was *irregular.*

Laſtly, in the 16 remaining, of whom *two* had *an irregular Pulſe*, the Hemorrhage and Symptoms appeared *with a Conſtancy equal to the Duration of the Rebounding Pulſe*, tho' *five only, or ſix at moſt*, bled exactly in the Circumſtances mentioned by Dr. *Solano* in his Rules of Prognoſtication.

CHAP. II.

The Reſult of my own Obſervations on the Intermitting Pulſe.

OF 23 Perſons, in whom I have obſerved the *Intermitting Pulſe*, *one only* had the *Intermiſſion regular and permanent*; and in this Perſon the *Diarrhœa* anſwered my Expectation, according to the Rules laid down by Dr. *Solano.*

In the other 22, the *Intermiſſion* of the Pulſe *was irregular and ſhifting*; and tho' the

the *Diarrhœa* thereby ſignified could not, according to the Doctor, be poſitively depended on †, yet *eighteen* of them were pretty regularly attended with one or more of the following Symptoms, *Griping*, *Rumbling* in the Inteſtines, *Wind*, the *Piles*, *Looſeneſs*, and in a few *an extraordinary Coſtiveneſs*, or *an Indigeſtion*.

In *two* of the remaining five Caſes, the *Correſpondence* of theſe Symptoms with the *Intermiſſion* of the Pulſe was *more irregular and equivocal*, in a *third* inſignificant; *yet with this remarkable Circumſtance, that after the Patient was purged, the Intermiſſion gradually diminiſhed and diſappeared.*

Laſtly, of the whole Number, the *two* remaining Caſes of the five mentioned in the laſt Paragraph, are the only which were *free from any of the above-mentioned Symptoms.*

† *P.* 2. *n.* 3.

CHAP.

CHAP. III.

General Remarks on the Whole.

FROM the foregoing Obſervations it appears, that of all the Perſons in whom I have obſerved the *Rebounding Pulſe*, the *Ratio* of thoſe who either bled at the Noſe, or were manifeſtly affected with ſuch Symptoms as may be deemed *a Tendency to* a Hemorrhage of this kind, or *the Conſequence of its Failure*, to thoſe who were affected with neither, is ſomewhat more than Sixteen to One.

That of ſuch as were merely affected with various Symptoms in the Head, to the whole Number, ſomewhat more than One to Three.

That of ſuch as were regularly affected with theſe Symptoms, to the Whole, near as Two to Seven.

That of ſuch as bled, to the Whole, near as Five to Eight.

The Ratio of ſuch as certainly bled by the Noſe, to the Whole, near as Eight to Fifteen.

Such

Such whoſe Hemorrhages and Symptoms remaining after the Hemorrhages, bore a tolerable Correſpondence with the Pulſe, to the Whole, near as One to Four.

Such whoſe Hemorrhages and Symptoms bore a more exact Correſpondence with the Pulſe, to the Whole, as Two to Fifteen.

Such whoſe Hemorrhages bore an exact Correſpondence with Dr. *Solano*'s Rules, to the Whole, as One to Twenty.

The joint Proportion of ſuch in whom either the above-mentioned Symptoms or Hemorrhages *regularly perſevered, whilſt the Rebounding Pulſe ſubſiſted*, to the Whole, as Two to Three.

Of all the Perſons in whom I have obſerved Hemorrhages by the Noſe, ſince I have had the Knowledge of Dr. *Solano*'s Obſervations, the *Rebounding Pulſe* was miſſing in *Two only*.

Theſe Obſervations, tho' much inferior to thoſe alleged by Dr. *Solano*, are ſtill *abſolutely new* in Medicine, and (even unſupported by cor-

correlative Facts) muſt appear very ſurpriſing.

Now with reſpect to the Deficiency of my own Obſervations, it is neceſſary to remark:

1°. That of the One hundred and fourteen Perſons, in whom I have obſerved the Hemorrhages and Symptoms above-mentioned, *Twenty-eight*, that is *near One-fourth*, having had *an irregular Pulſe*, could not be depended on for a regular Appearance either of the Symptoms or Hemorrhages.

2°. That the Sum of the irregular Pulſes, Eleven, in the irregular Caſes Thirty-three, makes exactly *One-third* of the Whole: That of the irregular Pulſes, Seventeen, in the more regular Caſes Eighty-one, does not amount to full *One-fifth* of the Whole: Whence it appears, *that on the Proportion of the regular and irregular Caſes, the latter were moſtly ſuch as were attended with an irregular Pulſe.*

3°. That of the whole Number in general, *ſcarce five or ſix laboured* under *acute Fevers*, and *none of theſe* ſuch as are, according to our practical Authors, *remarkable for Hemorrhages*; and that ſuch *Hemorrhages* as I have obſerved, were moſtly *inſignificant in*

Quan-

Quantity, and without any *conſiderable Effort* of the Conſtitution.

4°. That in ſome Patients, the Hemorrhages I expected by the *Rebounding Pulſe*, did not break out *till helped by a kind of Preſſure or Concuſſion*, as *ſpontaneous Sneezing*, *an Effort in going to Stool*, *or Vomiting*, which in theſe Perſons was neceſſary to overcome the Reſiſtance of the Veſſels of the Noſe. This Reſiſtance was manifeſt in ſeveral of thoſe on whom I have made my Obſervations, by a natural or morbid *Dryneſs*, *and want of the proper Secretion of Mucus* in this Part. Thus may a Tendency to a Hemorrhage by the Noſe really ſubſiſt, without any Appearance of Blood.

5°. That ſome of the Patients under this Pulſe, who bled in very ſmall Quantities, or ſhed only a bloody *Mucus*, were careleſs in giving me Notice thereof, tho' they were thus affected for ſeveral Days together. I diſcovered it ſometimes by mere Accident; others perhaps might have been in the ſame Caſe, without my Knowledge. How far theſe Circumſtances have concurred to cauſe a Difference between Dr. *Solano*'s Obſervations and mine, the Reader may determine.

I muſt alſo add here, that my Obſervations are not, in general, as complete as I could

could wiſh them : A very ſmall Number excepted, they were all made in the Hoſpital of *San Juan de Dios* in *Cadiz*. In moſt of the Patients, I had not the Opportunity of obſerving the firſt *Appearance* nor the *Termination* of the *Rebounding* and *Intermitting Pulſes*, having no proper Information of the State of the Pulſe previous to my Obſervations, and moſt of the Patients having quitted the Hoſpital before theſe Pulſes ceaſed; wherefore I could not compare the State of the Patients under theſe Pulſes, to that they were in before and after, whence no ſmall Light would have reſulted.

Neither had I the good Fortune to meet with the *Pulſus Inciduus*, nor with ſuch Caſes in which the *Rebounding and Intermitting Pulſes gradually move from the greater to the ſmaller Periods of their Appearance*, as mentioned *p.* 2. *n.* 2. and have no perſonal Experience of the *Criſes* by *Vomiting or Urine*. Theſe Caſes therefore are to be entirely referred to farther Experience.

Tho', from theſe Deficiencies, my own Obſervations do not entitle me to form a complete and abſolute Judgment of Dr. *Solano*'s Rules of Prognoſtication, ſtill there are ſome particular things which I can from thence poſitively determine.

1°. It

1°. It appears, *that there really exiſts a general Connexion between the Pulſes mentioned by Dr.* Solano *and their reſpective Criſes*; whereas only One-ſeventeenth of the Perſons in whom I have obſerved the *Rebounding Pulſe* were free from Hemorrhages by the Noſe, or from various Diſorders in the Head, while (even abſtracting from the irregular Caſes) Two-thirds *of the Whole were remarkably affected with either, and by much the greater Part of this Number with both*, particularly with a *Sneezing*, *Stuffing* and *Itching of the Noſe*, which I have obſerved more frequent and conſtant in ſuch Perſons as had no Hemorrhages.

As my Obſervations on the *Intermitting Pulſe* are few and tolerably uniform, they require no Recapitulation here: The Reader muſt retain a freſh Idea of the *Looſeneſs* and *Symptoms* with which it was attended. In Confirmation of *this Connexion between the Intermitting Pulſe and a Diarrhœa*, it may be proper to add here, what I have been aſſured by Monſ. *Ferren*, an eminent Phyſician of *Paris*, *viz.* that he has obſerved this Pulſe ſo regular a Symptom of a *Saburra* of the *Primæ Viæ*, that on purging the Patient the *Intermiſſion* diſappears, and that from his repeated Experience thereof he looks on the *Inter-*

Intermitting Pulſe in Acute Fevers *as a real Indication for Purging*. An Obſervation very analogous to Dr. *Solano*'s and mine. This Hint may be further corroborated by a known practical Remark, which is, that the *Intermitting Pulſe* is no uncommon Symptom of Worms in the *Primæ Viæ:* Be the Cauſe of this what it will, the Fact is manifeſtly to my Purpoſe.

2°. Notwithſtanding the various Evidence, which, from the Beginning of this Work, appears *in favour of the Connexion obſerved between the Pulſes above-mentioned and their reſpective Criſes*, that of Dr. *Solano*, of the Phyſicians mentioned in the Preface, of *Proſper Alpinus*, of ſuch as follow at the End of this Work, and laſtly of my own; I ſay, notwithſtanding all this Evidence, it appears from the Number of Perſons who, according to ſome of my Obſervations, did not bleed at the Noſe under the *Rebounding Pulſe* or, did not bleed exactly according to Dr. *Solano*'s Rules, *that this Pulſe* is rather *the Sign and Effect of a Tendency to a Hemorrhage by the Noſe, than an abſolute and certain Sign of this Hemorrhage*, as the Doctor has peremptorily publiſhed. That it is *a real Effect of this Tendency*, may be juſtly concluded from the diſappearing of this Pulſe, when the Hemorrhage and all Diſpoſitions towards a new

one

one ſubſiſt no longer, which I have ſometimes obſerved †.

3°. Since the Hemorrhage *cannot always be abſolutely depended on from the Appearance of the* Rebounding Pulſe, *much leſs can the Time in which the Hemorrhage is to happen be exactly predetermined*, let the Cauſes of its Detention be what they will. This has alſo been confirmed to me by my Friend *Don Juan de Pedraza y Caſtilla*, who, tho' he has often experienced the Truth of Dr. *Solano*'s Rules of Prognoſtication, (as will appear by ſome Caſes at the End of this Work) has ſometimes been diſappointed by his Reliance on them. Nay, the *Doctor himſelf* has acknowledged to me in a Letter, a few Months after my Departure from *Antequera*, that in ſeveral of the Caſes which for ſome ſmall time before occurred to him, the *Criſes* indicated by the Pulſe, on account of various Impediments in the Excretory Ducts, or in the Fluids which were to be evacuated, did not happen regularly within the Time limited in his Rules of Prognoſtication; but nevertheleſs he aſſured me, that they immediately appeared on the Removal of thoſe Obſtacles.

† See *Part* II. *Sect.* II. *Ch.* I. *Obſ.* 4. and 5. Various Inſtances of the ſame from others may be ſeen thro' this whole Work, but eminently *Part* I. *Sect.* II. *Ch.* I. *Obſ.* 7. and *Part* II. *Sect.* II. *Ch.* II. *Obſ.* 7. and 8.

Some Species of Hemorrhages there are, *which probably can have no Connexion with the Rebounding* Pulſe; ſuch, I ſay, *as happen without any Effort of the Conſtitution, and ſpontaneouſly flow from a ſimple Dilatation or Eroſion of the Capillary Blood-veſſels of the Noſe*; becauſe I conceive the *Rebounding Pulſe* to be the Effect of that general State of the Solids which tends to a Hemorrhage at the Noſe, with ſome Degree of *Streſs* and *Contention.*

I now come to ſome general Remarks on the *Intermitting Pulſe.* As this is much more eaſily perceived than the *Rebounding Pulſe*, it has been the Object of many curious Obſervations, while the latter lay almoſt entirely neglected. The Diſſection of ſuch as have laboured under an habitual *Intermitting Pulſe* has plainly brought to Light the Cauſes which produced it *in various Diſorders and Impediments of the Heart, neighbouring Blood-veſſels and Lungs*; and Mechanical Theory has enabled us to demonſtrate *from them* the *Intermiſſion* of the Pulſe. All Caſes of this kind, which every intelligent Phyſician muſt be acquainted with, are evidently ſo many Exceptions to the Rule by which Dr. *Solano* eſtabliſhes the *Intermitting Pulſe* a Sign of a Critical *Diarrhœa.* But ſuch Caſes the *Doctor*, who was very limited in his Reading, had

had no Knowledge of, or did not attend to. It is evident in general, that an habitual Pulſe cannot be Critical †.

Beſides the known Cauſes of an *habitual Intermiſſion* in the Pulſe, we can from evident Principles demonſtrate ſome Cauſes of a *tranſient fleeting Intermiſſion* entirely foreign to a Criſis; ſuch as *Spaſms*, *Convulſions*, *Inflammation of the Heart*, *Weakneſs*, *an extraordinary Repletion* or *Inanition*, with a few others equally obvious, in which a judicious Phyſician cannot be miſtaken. Such Caſes are alſo as many Exceptions to Dr. *Solano*'s general Rule on the *Intermitting Pulſe*.

But it is certain, in Matter of Fact, that the Appearance of this Pulſe is not confined to ſuch Caſes as I have hitherto mentioned. Hence various other Cauſes have been gueſſed at by *Theoriſts*, but none plainly demonſtrated, or applicable to particular Caſes with any tolerable Degree of Certainty; they muſt therefore remain in the Claſs of mere abſtracted Poſſibilities, with which Men of real Knowledge have no Concern. Whence it is plain, that in all ſuch Caſes we are not, *in the preſent State of Knowledge*, furniſhed

† *Ballonius* has, ſomewhere in his Epidemics, an Inſtance of an habitual *Rebounding Pulſe*, the only one of this kind I remember to have met with.

with ſufficient Reaſons to deny the *Intermitting Pulſe* a Significancy of a *Diarrhœa*. This depends entirely upon Experience, and is thereby to be determined; tho' the mechanical Cauſes of the Relation of this Pulſe to a *Diarrhœa*, or of the other Critical Pulſes to their reſpective Evacuations, ſhould for ever remain a Myſtery, as we muſt now confeſs them to be.

I am ſenſible, from my own Experience, how apt moſt Reaſoners will be, on the firſt View of this Treatiſe, to form to themſelves a thouſand various Explanations of the Cauſes of theſe Pulſes, Cauſes abſolutely foreign to any Idea of a Criſis; but I am equally ſenſible, that an exact Attention to the Circumſtances under which theſe Pulſes frequently appear, will ſoon diſſipate ſuch vain Phantoms of the Imagination, and wiſh this Hint could as effectually prevent them.

In the Midſt of this Obſcurity, I think I can venture to conjecture, from ſeveral Obſervations I have made on the reciprocal ſhifting of the Critical Pulſes from one Wriſt to the other, that they do not proceed from any Cauſe *limited to the Heart* or *general Syſtem of the Blood-veſſels*; for in either Caſe it is demonſtrable, that the Arteries of the Right and Left Side muſt be equally influenced thereby, through the common Arterial Trunk, except

except the Veſſels of the one Side were different in Structure or Strength from thoſe of the other, which I allow to be often the Caſe in this laſt reſpect, becauſe I have generally obſerved the *Rebounding Pulſe* more evident in the Right than the Left Wriſt, the Arm of this Side being commonly leſs exerciſed and weaker: But then it is evident, this, and all other Differences ariſing from the preſent Hypotheſis, ſhould be permanent, and not variably ſhift from one Side to the other in the ſame Perſon. The Difference of Poſition or Attitude of the Body, and conſequently an unequal Compreſſion of the Axillary and Brachial Arteries at different Times, may be urged in favour of this Shifting in the ſame Perſon; but again, I have often obſerved it too regular to be attributed to ſo fleeting a Cauſe as this†.

There remains no other to which this Phænomenon can properly be attributed but the *Nerves*, the prime original moving Powers of the Body, which, we know, both from common Experience and Anatomy, *have an independent Action in their diſtinct Diſtributions*, and may *differently affect the one and the other Side of the Body at the ſame time*. Among

† What ſtill more evidently proves, that the Shifting of the Critical Pulſes is not owing to any Compreſſion of the Arteries, is, that the *Rebounding* ſometimes ſlackens, or even diſappears, while the very Pulſe in which this happens grows more full and free. See *Sect.* II. *Obſ.* 8. *Note.*

ſome other Differences, I have obſerved the *Rebounding* and *Intermitting Pulſes*, which before were equal in both Wriſts, to diſappear totally in the Right Wriſt for ſome Hours, nay for a whole Day, while they perſiſted with their uſual Evidence in the Left, and then again ſhift from this to the former: Whence it may be very probably inferred, that not only *the Shifting and other Differences* of theſe Pulſes, but alſo *the Pulſes themſelves*, proceed from an immediate Influence of the Nerves on the Heart, and its appending vaſcular Syſtem, for the Reaſons above-mentioned; which would prove a Caſe very diſtinct in its Cauſe from the common Irregularities of the Pulſe.

On the Whole, tho' my Obſervations fall ſhort of thoſe alleged by Dr. *Solano*, yet it muſt be allowed they tend to prove the ſame thing in general which he has advanced, and thereby give, independently of the many Witneſſes he produces, a great Degree of Credibility to his Facts: But notwithſtanding the Truth of theſe, from what I have obſerved, I can ſcarce think all his Obſervations on this Matter were of equal Exactneſs and Force with thoſe he has publiſhed. His Imagination ſeemed overcome by a Number and Variety of extraordinary Facts of this Kind; inſomuch that in the Caſes we jointly obſerved, when the Evacuations indicated by the Pulſe happened to meet with any Delay, I have always found him ready

ready to catch at every little Reaſon and Circumſtance to reconcile ſuch Delays to the abſolute Certainty of the Indication. He was perſuaded his Obſervations had led him to a fixed and perfect Method of prognoſticating *Criſes*, as may be obſerved by his Rules in the Beginning of this Work; and by a Hurry of Imagination too common in Obſervers of new and extraordinary Things, he publiſhed them as a complete Diſcovery in this reſpect. So difficult it is for Human Nature to preſerve a ſteady Judgment under the flattering Ideas and Over-bearing of Self-ſatisfaction in Succeſs of any kind!

It is plain how much I differ from Dr. *Solano*, by reducing this Matter *to a ſimple Connexion between the Pulſes I have obſerved and their reſpective Criſes*, a *Connexion* by which the Critical Tendencies of Nature are brought to Light, *Criſes* have been often foretold at ſeveral Days Diſtance, independently of the Signs mentioned by the *Ancients*, and therefore may hereafter. In this Light alone I publiſh the preſent Obſervations.

I am at the ſame time convinced this Matter is to be managed with Caution and Patience: Caution, to avoid a *peremptory Prognoſtication*, or the *falſe Hopes of a Criſis*, when there may be only an *ineffectual Tendency towards it*: Patience, to obſerve minutely

nutely all the Symptoms that accompany the Critical Pulſes, and to purſue ſteadily the Obſervation of ſuch Caſes, notwithſtanding the Diſappointments which may occur, either through an Inexperience of theſe Pulſes, or the Irregularity of the Caſes themſelves. He who is not ſatisfied to examine the Matter on theſe Terms, ſhould give himſelf no Trouble about it.

It is to be conſidered, how ſmall a Portion of abſolute Certainty we enjoy in Phyſic, and conſequently how important, how precious is every Grain of Certainty we can add to it. This is evidently gained by the Concurrence of ſeveral Circumſtances to prove the ſame Thing; the more theſe are multiplied, the greater the Certainty. Now ſhould *the Connexion hitherto inſiſted on* appear on future Experience more variable than I have found it, nevertheleſs, as *this Connexion in general* is in Matter of Fact *proved beyond all Diſpute*, it is plain, that the Appearance of any of the above-mentioned Pulſes, in Conjunction with the other known *Critical Signs* of the Evacuation indicated by the Pulſe, muſt form a ſtronger Evidence in favour of the Criſis, than can be obtained by the ſeparate Appearance of any Number of theſe Signs.

Tho' the *modern Practice* ſeems generally calculated to prevent *Criſes*, nevertheleſs it is certain in Fact, theſe ſometimes happen, nay after

after repeated Evacuations, and Remedies of all Sorts †. When the Conſtitution is thus bent, it muſt be allowed a great Advan age to foreſee the impending Criſis. Even in ſuch Caſes in which there is only an ineffectual Tendency to a Criſis, it is of mighty Importance to the Phyſician to know towards what Evacuation Nature inclines, or in other Terms, what is then the real State, the Play and Oeconomy of the diſtemper d Machine. Either this muſt be the Evidence a Phyſician proceeds on, or none; and what leads to a more exact Knowledge in this way, deſerves the Attention and Reſearches of every Well-wiſher to Mankind, which is the only thing I aim at, leaving the Reader to his own future Experience.

But, to procure an impartial Examination of this Matter, it will be neceſſary to remove ſome Difficulties, perhaps they may be juſtly called Prejudices, which from the Days of *Paracelſus* and *Van Helmont*, have prevail'd with moſt Phyſicians againſt *Criſes*, and may raiſe a Cloud of miſtaken Objections on the very Mention of the preſent Work. Theſe therefore I ſhall conſider in the following Chapter, with all the regard due to the Prevalency of Cuſtom on the one Side, and with all the decent Freedom which Truth may require on the other.

† The Reader will find ſo many Inſtances of this in the preſent Work, that they need not be pointed out here.

CHAP.

CHAP. IV.

Some general Hints on the Nature, the Ancient *Obſervance, and* Modern *Neglect of* Criſes.

FROM the general Neglect of *Criſes* in the preſent Age, it is juſtly apprehended, that many will be apt to *cenſure* this Work as deluſive and imaginary, tending to revive in the Practice of Medicine *the old exploded Tenets of Criſes* eſtabliſhed by *Hippocrates*.

To prevent ſo ſpecious an Objection, I beg leave to obſerve to the Reader,

1°. That in this Work it is evident I merely inſiſt on particular Facts; and even theſe I propoſe only as an Inducement to the Gentlemen of the Faculty, (a very ſufficient one, if I am not greatly miſtaken) to make their Obſervations on the ſame Matter, that by a more extenſive Experience it may be determined how far it obtains, and what Streſs is to be laid upon it.

2dly, Suppoſing even that in the common Courſe of Practice, *Criſes* were neither to be depended on, nor attended to; nevertheleſs it muſt be allowed, that the Facts delivered in this

this Work have their Merit, in bringing to Light ſeveral particular Caſes never before thought of; and in ſtanding as Examples at leaſt in Caſes of the ſame kind, which muſt naturally occur from time to time, ſince they have already been ſo often obſerved in the Courſe of a few Years.

3dly, Beſides the Inſight theſe Facts in general afford us into the Critical Tendencies of Nature, there accrues to *Medicine* an undeniable Advantage from the Obſervations on the *Intermitting Pulſe* in particular. It is very well known, what *fatal* Prognoſtics are annexed to the Appearance of this Pulſe in Acute Fevers*, both by our *modern* and *ancient* Authors: What Scenes of groundleſs Terror and Deſolation have been thereon cauſed in Families! What inglorious Miſtakes in Phyſicians, who have, in ſuch Caſes, more than once poſitively pronounced the Doom of their Patients, and deſerted them in a Panic, while wiſer Nature happily played her Part *unperceived*, and in the common Courſe of Things, wrought Cures, which *inadvertent Art*, in its own Defence, ignorantly called Miracles! But now theſe Terrors and Miſtakes are effectually removed by the Facts I mention, the *Intermitting Pulſe* in Acute

* This does not extend to Children or aged People. See *p.* 43.

Fevers

Fevers is no longer formidable of itſelf; it becomes ominous then only, when other Signs, diſtinct from this, concur to ſhew, *that it is not Critical, that the Criſis thereby denoted is improper, or that the Patient is too weak to undergo it*; and the Phyſician, freed from idle Apprehenſions, is left to judge coolly from the whole State of the Caſe, whether the *Intermitting Pulſe* denotes either *Danger*, or *a happy Criſis*. Were *Medicine* to reap no other Benefit by the preſent Work, than multiplied Examples of *innoxious Intermiſſions* of the Pulſe in Caſes wherein they are generally held *mortal*, it muſt be allowed a Matter of no ſmall Importance.

4thly, Tho' it is notorious, both from the Bulk of *modern* Writers and Practitioners in Phyſic, that the Obſervations of the *Ancients* on *Criſes* are almoſt generally neglected; yet I dare venture this bold Aſſertion, *viz. That theſe Obſervations have never yet been publicly proved falſe or precarious, or our Neglect of them properly juſtified by any Author.*

I acknowlege myſelf, at the Diſtance I now am from my Books, unprepared for ſtating the Caſe on the Side of the *Ancients* in as ſtrong a Light as it is capable of; nevertheleſs, ſince it has been hitherto neglected, I hope the following Remarks, which accidentally

dentally lie by me, will not be diſagreeable to the Reader.

To remove a dead Lumber of Objections, which has been ſo frequently heaped upon the Doctrine of *Criſes*, I ſhall begin by obſerving, that notwithſtanding the Confuſion of the Works commonly attributed to *Hippocrates*, and the multiplied Contradictions which occur therein, yet from a general View of the Whole, it appears, 1. That it is not there pretended, that all Acute Fevers are to be terminated by *Criſes*. 2. That beſides the Days called *Septenary* and *Semi-ſeptenary*, (how proper or improper the Name, is foreign to my preſent Purpoſe, which only takes in the Subſtance of Things under their uſual Denominations) beſides theſe, I ſay, others, as the *fifth* and the *ninth*, were acknowleged Critical Days. 3. That the *Even* Days, or *Dies Pares*, were alſo allowed to be Critical, and conſequently, as far as can be gathered from the Facts contained in theſe and other *ancient* Writings, (rejecting all the acceſſory Errors, and philoſophical Fables, imprudently intruded into this Subject) that the real Doctrine of *Criſes* imports no more in general, than, 1*ſt*, That the *Septenary* and *Semi-ſeptenary Days are in a peculiar manner dedicated to the Critical Revolutions of Acute Fevers, and moſtly ſuch Revolutions as tend to the Recovery of the Sick, without any Excluſion*

tion of the other Days, particularly from the leſs favourable Criſes. 2dly, That Criſes can be foreſeen by the Signs deſcribed for this Purpoſe by the Ancients.

This once allowed to be the Caſe, as I believe it muſt, all ſuch Objections as have been made againſt the 61ſt *Aphoriſm*, *Sect.* 4. of *Hippocrates*, and other correlative Paſſages, againſt the *Pythagorical* Numbers, the pretended Conformity of *Criſes*, and Critical Days, with the Courſe of the Moon *, the Contradiction found in the various Combinations of the *Septenary* and *Semi-ſeptenary* Days, and in their Coincidence with the *Dies Pares*, together with a thouſand other Objections of the ſame Nature, tho' inſiſted on with ſo much Clamour by ſeveral Authors, evidently ſtick in the Surface of Things, and fall quite ſhort of the Subſtance and real Doctrine of *Criſes*.

It is moreover evident, that ſuch Objections as have been raiſed on the ſuppoſed Differences in reckoning the Days of Acute Fevers, are precarious and of no Force, while theſe Differences are not poſitively proved in the particular Caſes alleged in favour of the ancient Obſervations on *Criſes*.

* This I mean merely in the *Galenic* Hypotheſis, and not in the rational Senſe propoſed by the learned Dr. *Mead* in his Treatiſe *de Imper. Sol. & Lun.*

Such

Such as are derived from abſtracted Theoretical Ideas, are abſolutely puerile; becauſe it muſt be acknowleged we never yet could demonſtrate the Cauſes of the regular Critical Periods in the Small-Pox, Meaſles, Intermitting Fevers †, and ſeveral other *daily occurring* Diſtempers. Matters of this Nature lie ſo much beyond the Reach of our preſent Portion of Knowledge in the Theory of Medicine, that it muſt be allowed an Attempt equally abſurd, either to prove or refute them by any abſtracted Principles of Reaſoning.

Thus it appears, that the whole Caſe between ſuch as ſtand for the real Obſervance of *Criſes* in the Senſe above-mentioned, and the Generality of *modern* Practitioners, is entirely reduced to the Matters of Fact on both Sides.

That the *Ancients* have inſiſted on, and produced Matters of Fact on their Side, and that theſe Facts have been confirmed by ſome *Moderns*, is notorious.

It will be ſufficient for my preſent Deſign (which is only to awaken the Attention, and

† *Bellini*'s Account of this is only an ingenious Hypotheſis.

excite

excite the Enquiries of abler Phyſicians into this Subject) to give here two Inſtances of Obſervations in this Way, even in our Northern Climates, from two eminent Practitioners, the one *ancient*, and the other *modern*.

The latter is the celebrated *Frederic Hoffmann*, an Author ſo well known, and ſo common, that I need only refer the Reader to his general Obſervations on *Criſes* in the 3d Vol. of his *Medicina Rationalis*; in which he vindicates the *Ancients*, and ſhews from a nice Experience *of Forty Years Practice*, that in moſt Acute Fevers, *the third, fourth, ſeventh, eleventh, or fourteenth Day*, is particularly remarkable for Critical Revolutions; and diſtinguiſhes from all other Days, the *ninth* and *eleventh*, for the *unhappy Caſtaſtrophes*, which frequently attend them. Surely ſuch a regular Courſe of Experience as this, muſt be allowed ſome Weight and Authority, or there can be no ſuch Art as *Medicine!*

The other Inſtance is from the famous *Foreſtus*, an Author not inferior to any Phyſician of his Age, either in Medicinal Erudition or Experience. As his Works are at preſent ſomewhat rare, I am perſuaded ſeveral Readers will be much better pleaſed to find here an Abſtract of what relates to the Subject

Subject I have in hand, than to be merely referred to the Original.

Of *forty-eight* Hiſtories of Acute Fevers related by this Author †, without any particular View to our preſent Subject, it is very remarkable, that *thirty-ſeven* Caſes (*viz. Three-fourths* of the whole Number) were either attended with *Criſes*, or terminated on ſuch Days as have been ſtyled *ſeptenary* and *ſemi-ſeptenary*; the 4th, 7th, 11th, 14th, 17th and 21ſt; of this Number, *viz. thirty-ſeven, ſeventeen Patients had Criſes, and all recovered*; of the *twenty others, who had no Criſes, ſix died:* A wide Difference indeed!

Of theſe Fevers, *five* were terminated on the 4th Day, of which *three* Patients died; *twenty-two* on the 7th, of which died the *other three*; the reſt were happily terminated, *ſeven* on the 14th, *two* on the 11th, *one* on the 17th, and *one* on the 21ſt.

The Remainder of the *forty-eight* Caſes (that is, *One-fourth* of the Whole) were either attended with *Criſes*, or terminated on the following Days, the 5th, 9th, 10th, 20th and 24th; but with this remarkable Difference from the above-mentioned Caſes,

† *Obſ. et Cur. Med. Edit. Rothomag. à p.* 12. *ad p.* 77.

that on theſe Days happened *two Criſes only*, a Number which does not amount to *One-fifth* of the Caſes belonging to this Paragraph, whereas the Number of *Criſes* which happened on the *ſeptenary* and *ſemi-ſeptenary Days*, is very near equal to *One-half* of the Caſes belonging to theſe Days. *Five of the Patients recovered, and the other ſix died*; that is juſt as many as died out of *the thirty-ſeven* mentioned in the two preceding Paragraphs.

Seven of theſe Fevers terminated on the 9th Day, of which *five* Patients died; the *other* died on the 5th, and of the *two* Critical Caſes *one* proved mortal.

Upon the Whole, it evidently appears, how vaſtly ſuperior was the *7th Day* to all the reſt, both as to the Number and happy Event of the *Criſes* and Terminations; for on this Day happened *twelve Criſes*, *nineteen* Recoveries, and only *three* Deaths. The next to the 7th was the 14th, on which happened *two Criſes*, *ſeven* Recoveries, and *no Death*. The 4th and 9th appear in the contrary Light; out of *five*, whoſe Fevers terminated on the 4th, all without a Criſis, *three* died: On the 9th appeared only *one* Criſis, and of *ſeven* Terminations on this Day *five* were mortal.

It appears alſo from the foregoing Obſervations, that of *nineteen* Patients, who had *Criſes*,

Criſes, *only one* died; a Circumſtance extremely favourable to the Critical Method of Practice, whereas of the *twenty-nine*, who had not the Benefit of *Criſes*, *eleven* died. And here it is proper to add a very important Obſervation on this Subject, which is, *that by the Rules eſtabliſhed by the Ancients*, Foreſtus *has foretold ſeveral of theſe Criſes one, two and three Days before they happened*, as every curious Phyſician, who will be at the Trouble of reading over thoſe Hiſtories, will ſee with no leſs Pleaſure than Improvement.

I am very averſe from eſtabliſhing any general poſitive Rules on ſo ſmall a Number of Facts, nor can I, at a Diſtance from my Books, and not entirely diſengaged from other Affairs, enter into an exact Compariſon of theſe Facts with ſuch as are delivered by other Hiſtorians of Acute Fevers; yet, if my Memory does not fail me, I dare ſay the Subject I now treat would not loſe much by the Compariſon, and I wiſh this were properly attempted. In the mean time, the foregoing Remarks are ſufficient to evince, that the Doctrine of *Criſes*, rightly underſtood, ſeems really ſupported by ſtrong Matters of Fact, and is neither to be ridiculed, nor treated in a ſupercilious manner, by any prudent Phyſician, till theſe and other like Facts are proved from Experience either *falſe* or *precarious*.

Now with reſpect to the practical Uſe of *Criſes* in Medicine, two Arguments may be urged againſt it.

The firſt, which I have heard objected by a Phyſician of Merit, is the Danger apprehended to accompany *Criſes*, on the Suppoſition, *That theſe ariſe only from a violent Struggle of Nature to diſcharge an overpowering Load of Fluids, a Struggle in which ſhe may ſink under the Burden, and conſequently is more prudent to prevent which, than to run the Riſque of.*

It muſt indeed be acknowledged, that the *Violence and Agonies* which attend ſome *Criſes*, with the dangerous Effects of Nature's failing in its Critical Efforts, enforce the foregoing Objection, and prove this to be ſometimes the Caſe: But that it is generally otherwiſe, appears almoſt evident from the following Obſervations.

1°. It is certain, there are many Inſtances of *Criſes* after very conſiderable Evacuations by Bleeding and Purging, of which ſome Examples may be ſeen in this Work.

2°. Several *Criſes* happen without any *remarkable Tumult* or *Struggle* in the Patient, of which alſo are ſome Examples in this Work.

Work. Theſe two Obſervations are abſolutely inconſiſtent with the Objection juſt now mentioned.

3°. *Criſes* generally follow a fixed Order, 1*ſt*, With reſpect to the Days in which they happen. 2*dly*, With reſpect to the preceding *Coction* or *Crudity*, by which the Succeſs of *Criſes* may be foreſeen with a Certainty equal to any other we have in the Practice of Medicine. This the Ancients have inſiſted on from Matters of Fact, and ſuch Moderns as have taken the Pains of making exact Obſervations thereon, have confirmed. 3*dly*, With reſpect to the *Prognoſtic Signs* by which *Criſes* may be foreſeen ſometimes three Days before they happen, when no extraordinary Tumult or Struggle appears in the Patient, as may be inſtanced from *Foreſtus*, *Solano*, and others.

From the Obſervations alleged in this laſt Paragraph, it evidently follows, that, *at leaſt in the Caſes there mentioned*, the Springs of the Body are, if I may ſo expreſs it, previouſly wound up to the *Key* of the future Criſis, and that all their antecedent Play tacitly concurs to prepare this Event. Such a Situation of the Body appears to be the natural and neceſſary Effect of the Seat of the Diſtemper, the Quality of the morbid Fluids, and the general Diſpoſition of the Syſtem of

Solids, whoſe imperceptible Combinations determine the Whole, without any dangerous Violence to certain meaſured Motions, and particular fixed Evacuations, by the ſimple Effect of Proportion and Harmony. This diſtant Preparation for a Criſis, under the Circumſtances mentioned in the three preceding Paragraphs, is evidently nothing leſs than the *ſteady Work of Nature*, or of that *providential Mechaniſm* of the Body deſtined by the *Creator* to ſubdue gradually, and then to caſt off, whatever is in any Degree noxious, through ſuch particular Outlets, as, according to the Combinations juſt now hinted at, are moſt capable of affording it a Paſſage. This *Work of Nature* is perpetual, conſtant and uniform, becauſe it is derived from a permanent Principle, the very Structure of our Body. In ſlight Fevers it is carried on almoſt imperceptibly, in ſmarter ones more evidently, and then alone with *Violence*, *Confuſion and Danger*, when the Body is under *violent Circumſtances*, *and the Springs of Life ready to crack.* In this laſt Caſe, and in this only, does the above-mentioned Objection hold.

The ſecond Objection conſiſts in the *Uncertainty of foreſeeing Criſes.* The Anſwer to this has been in ſome meaſure anticipated in the 3d Part of that to the firſt Objection; but indeed the main Point is, that this Charge

is quite arbitrary and deſtitute of Proof. The *Ancients* have pleaded Matters of Fact on their Side, of which I have already given ſome Inſtances, and from them laid down fixed Rules for the Prognoſtication of *Criſes*; Facts and Rules both equally adopted in our own Times by the great *Boerhaave*, not to mention ſeveral other Phyſicians of Repute. Every thinking Man muſt feel the Weight of ſo long a Series of Obſervations, and ſo much inſiſted on.

Now it is asked, From what Facts are the Rules laid down by the *Ancients* for the Prognoſtication of *Criſes*, proved falſe or precarious? by what Authors? in what Circumſtances?

Here it is to be remarked, that no Obſervations can with any Colour of Juſtice be urged againſt thoſe of the *Ancients*, but ſuch as have been made *on their Plan*. It is very evident, that if the whole Series of Signs, which by the Obſervation of the *Ancients* lead to the Knowledge of future *Criſes*, viz. The Signs of *Crudity* and *Coction*, with thoſe of an *imminent Criſes*, or any one of them, has been neglected in the Hiſtory of a Diſtemper, then ſuch a Hiſtory cannot, without an apparent Inconſequence, be alleged againſt the Certainty of the Obſervations of the *Ancients* on *Criſes*; becauſe it is plainly deficient

cient in one or more Circumſtances abſolutely requiſite for the Knowledge of *Criſes*. Again, ſhould this Obſervation be perfect in all the foregoing reſpects, and yet the buſy Practitioner, *upon a Critical Revolution* in the Patient, (which is often attended with an Exacerbation of the Fever, an Uneaſineſs, and ſometimes a *Delirium) diſturb* the Operation of Nature, by Evacuations, Narcoticks, or any other unſeaſonable Remedy, it is manifeſt, that in ſuch a Caſe the Deficiency of a Criſis (ſhould this fail thereon) cannot be attributed to any Uncertainty in the Obſervations of the *Ancients*. It is therefore again asked, *Whether there really exiſts in Medicine a Series of Obſervations accurately made on the Plan of the Ancients, which reverſes thoſe alleged by them on Crudity, Coction, and the Foreknowledge of* Criſes? If ſo, ſuch Obſervations ſhould be produced to public View; otherwiſe our *modern* Practice in Acute Fevers may be liable to many Difficulties, which have not yet been cleared up.

It is notorious, that in the preſent Age, a Method of Cure not improperly called *Herculean*, prevails in *Medicine*; that, I mean, by which Phyſicians attempt to maſter Nature, and force Acute Fevers to take the Turn they think proper on every Emergency, by the ſuperior Power of Reaſoning, without any

any regard to the Obſervations of the *Ancients* on the natural Courſe and Progreſs of theſe Diſeaſes. Thus, on the Appearance of any uncommon Uneaſineſs, of a *Delirium*, on an Exacerbation of the Fever, Blood-letting, Bliſters, Opium, or other Remedies, are immediately ordered, without examining, as the *Ancients* did by the antecedent Courſe of the Fever in all its Circumſtances, whether the Symptoms they ſtrike at are merely Symptomatical or Critical; a Matter which ſtill appears to be of great Importance in the Determination of any powerful Remedy, as may be judged by ſeveral Inſtances deduced from Practice. I ſcarce believe there is any *modern* Phyſician, who would not wiſh himſelf in the Place of *Galen*, when this great Man, by his Preſcience of an imminent Critical Hemorrhage of the Noſe, prevented a Bleeding ordered by other Phyſicians for a *Roman* Youth, and by the happy Succeſs of his Prediction obtained for his Patient the immediate Recovery of his Health, and for himſelf a glorious Reputation. In the third Caſe, on Hemorrhages of the Noſe, atteſted by Dr. *Alvarez* in the firſt Part of this Work, I do not imagine any judicious Phyſician would have been well ſatisfied with himſelf for having let the Patient Blood the Evening before the Criſis, as Dr. *Alvarez* intended; or could, on cool Reflection, expect from an artificial Bleeding ſo ſudden and

ſo

ſo complete a Recovery as the Critical Hemorrhage produced. *Ballonius*, I remember, an exact Obſerver of Nature, and acknowledged a judicious Practitioner, gives, in his firſt Book of Epidemics, a ſtrong Caution againſt Evacuations of all ſorts *at the Approach of, or on a Critical Day*, aſſuring he has often ſeen violent and dangerous *Hypercatharſes* conſequent to a ſlight Purge given on the ſixth Day of an Acute Fever. A like Obſervation is made in the 4th Book Περὶ Νόσων, attributed to *Hippocrates*.

As I apprehend ſome forward Theoriſts may look on theſe two laſt Hints as the Effect of a prepoſſeſſed Imagination, and ancient Medicinal Superſtition, it may for their ſake be convenient to confirm them by the Authority of the *greateſt Practitioner* that the preſent Age, or perhaps any other ſince *Hippocrates*, has produced. By this Character it will be eaſily perceived I mean *the late famous Dr. Radcliffe*. It is very well known, that this *great Man* was particularly remarkable for a religious and ſurprifingly ſucceſsful Obſervance of the Critical Operations of Nature, and in Acute Fevers extremely cautious in the Uſe of all ruffling Remedies, nay of the milder Claſs of Cathartics. Among ſeveral Inſtances of the Doctor's Senſe of this Matter, I have been told

told the following one, by a Phyſician of great Candor and Merit, who was very intimate with him. But while I relate the Fact, the Names of the Perſons concerned therein ſhall be ſuppreſſed, to avoid an invidious uſeleſs Reflection on their Memory. A Patient labouring under an Acute Fever died of an *Hypercatharſis* the ſame Day he took a gentle Purge; the Perſon who preſcribed it, produced the *Recipe*, and in his own Juſtification pleaded the *Mildneſs* of the *Medicine*, which appeared ſo gentle to the Phyſicians he applied to on this Occaſion, that they declared him entirely free from any Imputation of the Patient's Death. Dr. *Radcliffe*, whoſe Judgment thereon was required, after an Examen of the *Nature and Stage* of the Fever, acknowledged indeed the *Mildneſs* of the Cathartic, but in his own emphatical Style pronounced *it was ill-timed, diſturbed a Criſis, and thereby killed the Patient.* It is to be hoped, that the Senſe of a Phyſician, who by his admirable Sagacity in the Knowledge of Diſtempers, and by the unparallell'd Succeſs of his Practice, has added a new Degree of Dignity and Importance to Medicine, will have ſome Weight even with the moſt violent Enemies of *Criſes.*

From theſe few Hints out of a thouſand others, it appears how imprudent and dangerous

gerous it may be to preſcribe powerful Remedies at every Turn of an Acute Fever, without any regard to the Obſervation of *Criſes*.

This may be ſtill further corroborated, not only with reſpect to Acute, but Intermitting Fevers alſo, by the new and curious Obſervations of *Hippolytus Franciſcus Albertinus* in the *Acta Acad. Bonon.* Ann. 1731. Obſervations ſo generally confirmed by thoſe of ſeveral other Phyſicians ſince communicated to the ſame Academy, that this learned Body has not ſcrupled to publiſh them, as real, conſtant, and authentic. As the *Acta Acad. Bonon.* is not a common Book, I believe moſt Readers will be pleaſed to find here an Abſtract of the Obſervations I ſpeak of.

1°. From a nice and long Experience *Albertinus* has obſerved, that no Patient was perfectly and ſecurely cured of an Intermitting Fever by the Bark, without having *immediately*, *ſoon after*, or *ſomewhat later*, *Criſes* like thoſe which are almoſt ever obſerved in Fevers cured by other Remedies, or by Nature. An Obſervation which eſcapes ſuch Phyſicians, whoſe Diligence in Obſerving ceaſes with the Fever, and does not purſue the Patient through the whole Courſe of his Convaleſcence.

2°. That

2°. That the Uſe of the Bark brings on indifferently ſeveral diſtinct Species of *Criſes*; *Sweats*, *Stools*, *a Flux of Urine*, *nay of Saliva*, or an *augmented Tranſpiration* different from that which the Patient had before, and to be diſtinguiſhed by its *fetid Smell*: Of this laſt he ſingles out from ſeveral others a very remarkable Inſtance, in which, after the Uſe of the Bark, according as this *Critical Tranſpiration* variouſly ebbed or flowed, if I may ſo expreſs it, the Patient grew proportionably worſe or better, and thus continued in a doubtful Viciſſitude of Convaleſcence and Relapſe, until by a conſtant Flow for ſome Days he recovered perfectly. This Property of curing, by the Intervention, *Criſes*, *Albertinus* remarks in all other *Febrifuges* and *powerful Remedies in general.*

3°. That as the ſalutary Effects of the Bark are not limited to any particular Criſis, ſo neither is the Time at which any one or more of theſe *Criſes* appear on the Uſe of this Remedy, conſtant and regular: That ſometimes the Criſis happens only after the Fever is for ſeveral Days ſuſpended by the Bark, and the Patient ſeems recovered †, but that without it the Recovery is inſecure.

4°. That

† Something analogous to this may be obſerved in the Practice of the moſt eminent Phyſicians in *London*, with whom

4°. That theſe *Criſes* not only remove the Fever, but alſo recent Obſtructions of the Bowels, from thence derived.

5°. That in Intermitting Fevers, which are either preceded by, or attended with, the Suppreſſion of any habitual Evacuation, the Patients are in Danger, except good *Criſes immediately follow the Uſe of the Bark.* This *Albertinus* illuſtrates by ſeveral ſtriking Inſtances of Perſons ſeized by Intermittents on the *Receſs* or *Suppreſſion* of *Scabs*, *Ptyaliſm*, the *Gout*, various *Ichorous Fluxes*, or *Ancient Tumours*. The Bark was thereon given, the Fever conſequently removed for ſome Days, and the Patients in all Appearance perfectly recovered, but without any *Criſes*, when under the moſt flattering Hopes of good Health they ſuddenly fell into violent Diſtempers, ſome into *Inflammations*, *Acute Fevers* and *Swelling of the Parotids*, ſome into *dan-*

whom it has been for ſome Years paſt a known and ſucceſsful Cuſtom, to preſcribe gentle ſtrengthening Purges between the Suſpenſion of the Ague by the firſt Doſes of the Bark, and the Repetition of this Remedy ſome Days after, or to mix with it regularly from the Beginning ſuch a Quantity of this Claſs of Cathartics, as may juſt keep the Body open, without deſtroying the Effect of the Bark by too great a Laxity. The Method now mentioned was brought into Credit by the great Succeſs it had in preſerving the Patients from the *Cachexy*, *Jaundice* or *Dropſy*, which in a certain Epidemical Conſtitution frequently ſupervened on the Cure of the Ague in the common way.

gerous

gerous Affections of the Head, Stupidity and *Palſies*, and laſtly ſome into *Apoplexies*.

From the foregoing Facts *Albertinus* deduces a few practical Rules, which I here omit, becauſe they will readily occur to every judicious Phyſician. I ſhall only obſerve upon the Whole, that ſince Fevers, for which we have ſo powerful a Specific as the Bark, are not effectually cured *without the Intervention of Criſes*, ſince a nice Attention thereto is in Matter of Fact proved *ſo neceſſary in regulating the Conduct of a Phyſician in theſe Fevers, and fixing his Judgment with reſpect to real or fallacious Recoveries*, how much more muſt all this prevail in Acute Fevers, in the Cure whereof it is moſt notorious, that Nature acts a brisker Part, and has a greater Share than in the Cure of Intermittents? Since theſe *Criſes*, and their Conſequences, have *hitherto eſcaped the Obſervation of moſt Phyſicians in Intermitting Fevers*, ſince the Inobſervation of them has been productive of *ſo many, ſo weighty, and yet unperceived Miſtakes*, how ſtrong muſt the Suſpicion of like Errors fall upon the common Neglect of *Criſes* in Acutes? It ſeems at leaſt ſufficient to recall every thinking Phyſician to a rational Doubt and Examination of this Matter.

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The Inefficacy of the Bark in radically curing Intermitting Fevers, without the additional Help of *Criſes*, may lead us to a more exact Knowledge of the real Effect and Operation of Remedies, and ſuggeſt a more favourable Idea of *Criſes*, than has prevailed *ſince the Invaſion* of *Medicine* by the *Chymiſts*. To put this Matter in ſtill a ſtronger Light, it will be proper to examine and compare the ſalutary Effects of good *Criſes* with thoſe of our *moſt powerful Remedies*.

1°. It is certain there are ſome Situations of our Body which require particular determined Evacuations, to diſcharge the morbid Fluids, to which Evacuations it often proves both fruitleſs and dangerous to ſubſtitute any others. The *Hemorrhoidal Flux* indeed, and the *Menſtrua*, may be ſometimes ſuppreſſed by revulſive Blood-letting; nevertheleſs, tho' the Quantity thus evacuated may be equal, or even ſuperior, to that which was to be naturally diſcharged, this is generally found an imperfect Compenſation, incapable of preventing a thouſand Diſorders conſequent to the Suppreſſion, becauſe *Nature is not relieved in that very Way which the univerſal Determination of the whole Machine requires*, nor this Determination *changed by the ſubſtituted artificial Bleeding*. This ſteady Tendency of our Body wound up to a certain *Key*, if I may repeat the Expreſſion, is yet more evident in ſome

Head-

Head-aches, which could never be removed by all the Power of Evacuations in the common way of Bleeding and Purging, but were inſtantly and moſt ſurpriſingly carried off by *opening the temporal Artery*, of which we have many Examples in *Proſper Alpinus*, *Ballonius*, *Marcus Aurelius*, *Severinus*, *Meekren*, and others. Thus it is manifeſt from Matter of Fact, that on ſome Occaſions *certain particular Evacuations can alone diſcharge the Body of noxious Fluids, or change the Tone and Tendency of the Machine.*

Now, that a Criſis previouſly denoted by the proper Critical Signs, (that is, by the very Effects which reſult from the Circumſtances of the Diſtemper, and from the general Tendency of the diſordered Body) ſeems *eminently* one of thoſe natural Diſcharges, which cannot with equal Conveniency and Safety be ſupplied by any other Evacuation, is almoſt evident from the Principle hinted at in the preceding Paragraph; *viz. That Nature is by a ſpontaneous Criſis immediately relieved in that particular manner, which the Determination and Exigency of the Machine then requires.* This, if I am not greatly miſtaken, will appear to be real Matter of Fact to every unprejudiced Perſon, who ſhall exactly compare the *ſalutary Effects of many Criſes* to thoſe of our *moſt efficacious and Herculean Remedies*. Inſtances of Acute Fevers *ſuddenly and perfectly*

 removed

removed by Criſes, are too common in our practical Authors to be called in queſtion, and ſtand ſo proved by their own Notoriety, that I need not refer to ſome Facts of this Kind, which the Reader might have probably taken Notice of in the firſt Part of the preſent Work; whilſt on the other hand I do not remember, that ſuch Inſtances have been ever paralleled by any authentic Succeſs in like Caſes from *Medicinal Helps*. Theſe indeed have often produced extraordinary Effects, and viſibly given a favourable Turn to deſperate Caſes; but their Efficacy is limited to this, and perhaps has not once extended to *an immediate and perfect Removal of a ſmart Acute Fever*. Of all Remedies, *Arteriotomy* is that which has acquired moſt Honour to *Medicine*, by the wonderful Cures it has inſtantaneouſly performed; but it cannot be urged againſt the Point now in Hand; for ſo diſtant are we *Moderns* from having extended the Uſe of this *truly Herculean Remedy* to ſuch Caſes in Acute Fevers as ſeem evidently to call for it *, that we have generally neglected it, even in the very Caſes in which it has been ſo happily experienced by the Phyſicians of the laſt Century.

Thus, conſidering *Criſes* and our *beſt Remedies*, each in their moſt advantageous Light,

* *V. G.* Inflammations of the *Meninges* and Brain, particularly ſuch as cauſe a viſible Pulſation of the *Carotids*.

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it appears in Fact, that the former are greatly ſuperior in their Efficacy to the latter, and therefore cannot be properly compenſated by them.

2°. This may be farther evinced in ſome particular Caſes, by the vicious Qualities obſerved in the Matter of Critical Evacuations, ſuch as *putrid and extremely ſtinking* Urine, Stools and Sweats *: For ſhould a buſy Phyſician, thro' Imprudence or otherwiſe, prevent an imminent Criſis of this kind, how fatal may the Conſequences be? how uncertain the Expulſion of ſuch a Matter by other Outlets? how dangerous its Delay in the Body, till it may be expelled?

But granting our Remedies an Efficacy equal to that of a good Criſis, they ſhould only come into Play, when Nature does not manifeſtly and regularly proceed to ſuch a Criſis: For when ſhe does, they muſt be held *uſeleſs, if not immediately dangerous: Uſeleſs*, becauſe at beſt they are only ſuppoſed of equal Efficacy with a good Criſis; *dangerous*, becauſe they forcibly alter or weaken the general Tendencies of the Body, and diſ-

* *Galen*, quoted by *Ballonius*, *Ep. Ed. Venet.* p. 42. ſays ſomewhere in his Works, that all fetid Excretions are pernicious, which is a notoriouſly falſe Aſſertion. See above Obſ. V. on Critical Sweats. *Item Ballon. Ep.* p. 117. and *Albertin. Act. Acad. Bonon. loco citato.*

order the whole Machine, to ſhift it to another Determination, which cannot be conceived without a Confuſion comparable in ſome meaſure to the Diſcord of a muſical Inſtrument while changing from one Key to another. This is a ſtanding Inconveniency in all ſuch Caſes, and tho' not conſtantly attended with fatal Effects, yet by fixing on the Bowels ſuch morbid Humours as were ready for a ſpontaneous Critical Expulſion, it is proved *ſufficiently Dangerous* in the practical Hiſtories of Diſtempers, to deſerve more Attention than is generally allowed it in our *modern Herculean Practice*.

What I have hitherto alleged in favour of *ancient Obſervation* on *Criſes*, does by no means exclude a vigorous Method of Cure. It indeed requires in a Phyſician, a nice and continual Attention to all the minute Circumſtances of Critical Signs, but claims his Inaction then only when by theſe he foreſees a future happy Criſis. He is, in the Begining of an Acute Fever, entirely at Liberty to uſe the moſt efficacious Means our Art ſuggeſts, to prevent the Conſequences of an *Inflammation*, a *Plethora*, or a *Suburra* of the *Primæ Viæ*. This, according to Reaſon and Experience, is the Time of a briſk and vigorous Action, before the Diſtemper takes Root, and the Strength of the Patient, ſo neceſſary to bear the Effort of Remedies, is im-

impaired. This precious Occaſion, on which almoſt entirely depends the happy or unhappy Event of Acute Fevers, lies as open (at ſuch a Diſtance from the Critical Periods of the Diſtemper) to the Obſerver of *Criſes*, as to the Phyſician who neglects them; nay, the former will think himſelf fortunate, if at this time he can ſo maſter the morbid Cauſes, as to prevent the Neceſſity of a Criſis, and bring the Diſtemper to a ſpontaneous inſenſible Reſolution. In the riper Periods of the Diſeaſe, he is under no Reſtraint beſides that which ariſes from an exact Vigilance in obſerving all the Circumſtances of the Diſorder, a nice Attention in diſtinguiſhing thereby ſuch Revolutions in the Patient as are determinatively critical and ſalutary, from ſuch as are noxious; and laſtly, a prudent Abſtinence from all powerful Remedies under the Prevalency of the former. This is no more than the indiſpenſable Duty of every Phyſician, *while Nature is acknowleged to have any Share in the Cure of Diſtempers*; and I ſcarce believe, that any Gentleman of the Faculty would be thought ſo incontinent of Preſcription, as to complain of that Inaction which is pointed out to him by *the Self-ſufficiency of Nature*. In all other Turns of the Diſtemper, ſuch I mean as he finds purely morbid, of evil Tendency, or, tho' ſalutary in themſelves, yet unequal to the Greatneſs of the Diſeaſe; he may and ſhould exert himſelf

with all the Vigour and all the Powers of the *Herculean Method.* This, in Reality, ſeems the *Medium* between that *abſurd puſilanimous Practice*, which, from an injudicious Apprehenſion of diſturbing the Order of Nature and its Critical Tendencies, weakly abandons the Patient to the Violence of the Diſtemper, and that *precipitate Method* which confounds the ſalutary Operations of Nature with the mere morbid Symptoms, and by ſtriking at either indiſtinctly, perverts the regular Courſe of Diſtempers, produces new morbid Complications, and deſtroys the moſt natural and moſt efficacious Means of Recovery.

To ſum up the Whole of this little Diſſertation on *Criſes*, I think it appears, 1°. That clearing this Matter from all the foreign Hypotheſes and Fables, which the Prejudices of abſtracted Reaſoning have blended with it, the Queſtion concerning the real Exiſtence of *Criſes*, and Days peculiarly appropriated to them, is to be reduced to mere Matter of Fact on both Sides. 2°. That the Affirmative in this is ſupported by ſtrong Facts, *modern* as well as *ancient*, ſuch at leaſt as are ſufficient to engage all unprejudiced Phyſicians into a farther Examination of this Subject. 3°. That *Criſes* are not the mere Effects of Nature abandoned to herſelf, and violently ſtruggling under a dead Load of noxious

noxious Humous, as imagined by ſome Phyſicians; but rather *the gradual, ſteady, meaſured Operations of that exquiſite Mechaniſm and innate inceſſant Principle of Self-preſervation*, with which Providence was pleaſed to indue our Bodies, evidently deſtined by the *Creator* to ſubſiſt for a long Series of Years, notwithſtanding a thouſand various Diſorders and Dangers, to which they are, from the Nature of their own Frame, and the Influence of external Agents, daily expoſed. This has been ſhewn by the whole Set of Circumſtances that accompany ſalutary *Criſes*. 4°. That it may be dangerous to preſcribe powerful Remedies at every Turn of an Acute Fever, without any regard to the Obſervation of *Criſes*. 5°. That under a determined Tendency to a Criſis, this laſt cannot with equal Conveniency and Safety be compenſated by any other Evacuation. 6°. That the ſalutary Effects of good *Criſes* ſeem greatly ſuperior to the Efficacy of our beſt Remedies. 7°. That the judicious Obſervation of *Criſes* is conſiſtent with a very vigorous Method of Practice. 8°. That no Obſervations can be rationally alleged againſt the *Ancients* on this Matter, but ſuch as have been made on their Plan.

Having thus given ſuch general Hints as accidentally lay by me, concerning the Obſervations of the *Ancients* on *Criſes*, and the

Regard they ſeem to deſerve in Practice, I muſt acknowlege they appear to me of no ſmall Importance, tho' much inferior to what the Subject is capable of; nay, to what I could myſelf urge in its Favour, had I more Leiſure, and a proper Opportunity of my Books. It is fully ſufficient for my preſent Purpoſe, to obviate any miſtaken Objections againſt the Tendency of this Work, and to remove from it the *modern affected Contempt of Criſes*; I can ſcarce call it by a ſofter Name than that of *an affected Contempt*, until the Caſe on the other Side of the Queſtion be properly ſtated and juſtified. Till then it may, with ſome Appearance of Reaſon, be reproached to us Moderns, that we have in this Point deviated from the *Ancients* without Cauſe; and have been led into our preſent *Herculean* Practice by mere Cuſtom, and ſome Remains of the reigning Prejudices of the laſt Century.

SECTION

SECTION II.

Containing ſome particular Inſtances of my own Obſervations on the above-mentioned Pulſes *and* Criſes, *with ſeveral curious Caſes communicated to me by my Friends.*

CHAPTER I.

New Obſervations on the Rebounding Pulſe.

OBSERVATION I.

IN a Viſit Dr. *Solano* made me the Evening I arrived in *Antequera*, *September* 17. 1737, he told me he did not intend to lay any Streſs on what I till then had either heard or read of his *Diſcovery*: That he was ſatisfied to wave all antecedent Proofs thereof, and reduce it to the Teſt of ſuch *Facts* as ſhould occur during my Stay in that City.

Accordingly, on the 21ſt of the ſame Month, in the Morning, the Doctor took me to the Hoſpital of *San Juan de Dios* of *Antequera*,

tequera, to viſit a Patient who had the *Rebounding Pulſe*, a Lad of 16 Years, and middling Habit of Body, his Name *Juan de Ortega*, a Native of *Oſſuna*, juſt recovering from a continual Fever, in which he was both purged and blooded. The *Rebounding* of the Pulſe firſt appeared in him that Morning: It was *ſlight and continual in every Pulſation*, whereon Dr. *Solano* prognoſticated *a ſmall Quantity of Blood by the Noſe within the Space of* 24 *Hours*; and tho' I repreſented to him, the *Rebounding* ſeemed to me *inconſtant* *; that there appeared *no Tendency to Bleeding by the Noſe, nay not one of all the Signs of ſuch a Hemorrhage delivered by the Ancients*; nevertheleſs, to my great Surprize, he poſitively perſiſted in his Prognoſtication.

Thus the Patient continued till the 22d about Break of Day: Then he began *to itch in the Noſe, and ſneeze*, which was attended with *a ſmall Excretion of bloody Mucus, and a few inſignificant Drops of Blood.* The *Itching* continued for 24 Hours; about 10 in the Morning came from the Noſe *a ſmall*

* The Cauſe of the apparent *Inconſtancy* of the Rebounding to me was, as I ſoon afterwards obſerved in the ſame Patient, the different Manner of feeling the Pulſe; for the *Rebounding* was regularly perceived, whilſt the Finger remained ſlightly applied to the Artery, but diſappeared as often as I preſſed it.

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String of Blood; and as the *Rebounding Pulſe* continued, the Doctor inſiſted on the *Appearance of more Blood*, which accordingly happened in the Afternoon, to the Quantity of *eight or nine Drops*. The next Morning, *viz.* the 23d, the Patient ſhed *three or four Drops of Blood from the Noſe*, and as much more in the Afternoon. In the Evening the *Rebounding* of the Pulſe became more ſlow, and ſeemed almoſt a diſtinct Pulſation from the firſt Stroke. The next Morning, the 24th, I found the Pulſe *abſolutely natural**, whereon the Patient was diſmiſſed the Hoſpital.

I engaged him to call on me at my Lodgings, that I might there examine him privately; his Pulſe then continued *Natural*. I made him blow his Noſe hard, but no Blood appeared. I gave him Money to let me know if any Means were uſed to make him bleed at the Noſe. He anſwered, No; and told me, that he never before ſhed any Blood from that Part.

Observation II.

October the 10th, 1737, Dr. *Don Antonio Alvarez*, mentioned in the firſt Part of this Work, told Dr. *Solano* and me, he that Even-

* See *p.* 4. *n.* 6.

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ing felt the *Rebounding Pulſe* in a Patient of his; and thereon, tho' this Pulſe was ſomewhat obſcure, deferred a Bleeding which he had before ordered the Patient, and intimated to the Family his Expectation of an *Hemorrhage by the Noſe.*

The next Morning he ſent to Dr. *Solano* the following Note:

" SIR,

" Yeſterday I ſpoke to you of my Prognoſtication of an *Hemorrhage by the Noſe* in " *Don Juan de Zayas*, Son to my Couſin " *Don Chriſtoval de Zayas.* He is now in " the 5th Day of an Acute Fever, and tho' " the Circumſtances of the Diſtemper, his " Conſtitution and Youth, ſeemed to require " Blood-letting, nevertheleſs I deferred it, as " I told you, on the Appearance of the *Rebounding Pulſe.* Laſt Night the Patient " *bled at the Noſe:* I have ſeen his Handkerchief all bloody this Morning, and ordered it to be kept, that you may in the " Evening bring our Friend Dr. *Nihell* to ſee " it, to enquire into the Truth of this Fact, " and be Witneſs of the Surprize and Admiration it has cauſed in the Family, a Family, as you know, equally diſtinguiſhed for " its Rank and Veracity. I have prognoſticated *another Hemorrhage* for this Day, but

" in

" in leſs Quantity, becauſe the *Rebounding* " of the Pulſe is obſcure. I am, *&c.*

" *October* the 11th, 1737.

" *Don Antonio Alvarez de Aſeyjas.*"

At Four o'Clock in the Afternoon I went to viſit the Patient with Dr. *Solano*, his Son *Don Chriſtoval Solano*, and *Don Juan de Pedraza*, Batchelor in Philoſophy and Phyſic. We ſaw his Handkerchief all ſtained with Blood: The Quantity of the Hemorrhage was, in thePhraſe of the Family, an *Egg-ſhell-full*. The Patient was for ſome Days before troubled with a Heavineſs in the Head. We found the Fever very moderate, the Urine high-coloured, and the Pulſe *ſlightly*, but as I apprehended ſomewhat *indiſtinctly*, *rebounding*: Nevertheleſs Dr. *Solano* prognoſticated *another Hemorrhage*, and in the Evening Dr. *Alvarez* repeated the ſame Prognoſtication. The Patient was *very delirious* all the next Night, but no Hemorrhage appeared, nor could we perceive in the Morning the leaſt Remains of the *Rebounding Pulſe*; on which we diſcontinued our Viſits. Whether in this Caſe the Blood, which was to run off by the Noſe, was thrown in upon the *Meninges*, and thereby cauſed the *Delirium*, I leave to the Judgment of the Reader.

The

The Day after, *viz.* the 13th of *October*, Dr. *Alvarez* got the Patient blooded: In the Evening he obſerved the *Rebounding Pulſe again*, and gave Notice thereof to the Family. At Nine the next Morning the Patient *bled at the Noſe*, and was blooded a ſecond time in the Arm at Ten. Tho' I had no Knowlege of what happened ſince the 12th, yet my Curioſity led me to renew my Viſits. This Morning, *viz.* the 14th, I happened to call on the Patient about an Hour after the Hemorrhage, and ſaw his Handkerchief freſh ſtained with 12 large Spots of Blood. His Pulſe was ſo contracted, that I could not perceive any *Rebounding*; but this appeared again in the Afternoon, whereon I prognoſticated within the Space of twenty-four Hours another Hemorrhage, which did not anſwer my Expectation, tho' the *Rebounding* of the Pulſe continued as hitherto at every *Diaſtole*. This Diſappointment ſet Dr. *Solano* and me on a more cloſe Examination of the Patient; and we diſcovered, that ſince the Day before Dr. *Alvarez* had Aſtringents applied by Intervals to his Forehead and Temples: We immediately ordered them to be diſcontinued, and ſubſtituted thereto a Fomentation of warm Water; by which means the Patient had at Three o'Clock next Morning (the 16th of *October*) juſt ſuch *another Hemorrhage* as the laſt-mentioned, after which the *Rebounding* ceaſed as uſual.

The

The 17th, 19th, 20th and 22d, he had each Day an Hemorrhage with the following Circumſtances; the firſt and laſt were very inſignificant, the other two as thoſe abovementioned: The firſt was preceded by the *Rebounding Pulſe* the Evening before; the ſecond for almoſt two Days before, which by Dr. *Solano*'s Rules was ſomewhat irregular; the Evenings before the third and fourth, the *Rebounding* was obſcure, particularly before the third; however it is proper to obſerve, that it might have then juſt begun to return, whereas in the Morning the Pulſe was perfectly natural.

After the fourth Hemorrhage, the *Rebounding Pulſe* appeared by Intervals, but in ſuch an obſcure irregular manner, that there could be no Streſs laid on it.

In the whole Courſe of this Obſervation, it is very remarkable, how regularly the *Rebounding* of the Pulſe diſappeared after each Hemorrhage †, except *perhaps* the firſt.

Observation III.

October the 10th, 1737, came to the Hoſpital of *San Juan de Dios* of *Antequera*, *Franciſco Martin de Cueſta*, a Native of *Mo-*

† See *p.* 4. *n.* 6.

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lina in the Kingdom of *Arragon*, a tall ſpare Man of the Age of twenty-ſix Years, labouring under a Quotidian Fever, the Hypochondria obſtructed and painful, and his Colour *cachectic*. He was for ſome Days before troubled with a Heavineſs in the Head, which ſtill continued; and had an Hemorrhage by the Noſe.

October the 10th, the Pulſe appeared *ſlightly*, but *inconſtantly rebounding*; and the Patient had *a Head-ach*. The next Morning he ſhed by the Noſe *a ſmall Quantity of bloody Mucus*, and the *Rebounding* was *continual* in every *Diaſtole*, *manifeſt*, and near equal to the firſt Stroke: Whereupon Dr. *Solano* prognoſticated *more Blood* within the Space of twenty-four Hours. All Day long the Patient had *a ſhooting Pain in the Temples, with an Itching of the Right Noſtril*; and the next Morning, the 12th of *October*, *he caſt from the Noſe an inſignificant Quantity of Blood*, yet *more* than the Day before. The *ſhooting Pain in the Temples continued* with the *Rebounding* of the Pulſe, which was *very ſlight*, and Dr. *Solano* again prognoſticated *more Blood*. The Patient ſweated in the Evening, and at Night was taken with a *Diarrhœa*, which laſted till the 14th in the Morning, and relieved him in all reſpects †.

† This happened without any preceding or concomitant Intermiſſion of the Pulſe.

But

But in this Interval *no Blood appeared*; nevertheleſs, on the 13th, finding the *Pulſus Dicrotus* during the whole Afternoon more evident than hitherto, with a Lightneſs in the Head, I prognoſticated an *Hemorrhage within the Space of twenty-four Hours*, which *accordingly happened next Morning*: It was ſmall in Quantity, and came from the *Right Noſtril*. I felt the Patient's Pulſe ſome Hours after; the *Rebounding* was much the ſame, and, as before, more evident in the *Right than the Left Wriſt*. By theſe Circumſtances, and the Time at which the Blood heretofore regularly appeared, I prognoſticated for the Morning following *another Hemorrhage by the Right Noſtril*. The Event *perfectly anſwered my Prognoſtication* at Two o'Clock in the Morning, after an Hour's Pain of the Right Temple, Eye and Noſtril, to the great Surprize of the Patient. This Hemorrhage was ſomewhat greater than the laſt.

Fluſhed with this Succeſs, from the Continuation of the *Rebounding* I prognoſticated more Blood next Morning, but was diſappointed. However, in the Afternoon, (the 16th of *October*) I renewed the ſame Prognoſtication on the ſame Foundation. The next Morning the Patient awoke with *a great Pain in the Temples, Forehead and Eyes*, and in a few Hours after *appeared a ſmall Quantity of Blood by the Noſe*, which I am apt to

think, from the mentioned Circumſtances, would have been much more conſiderable, had not the Patient been *purged* that Morning; for how great a *Revulſion* may be made by a Purge from the ſuperior Blood-veſſels, every judicious Phyſician is ſufficiently appriſed of. *The Pain continued all Day*, and in the Afternoon the Pulſe approached very near to its natural State.

From the 18th in the Morning until the 20th at the ſame time, the *Rebounding* of the Pulſe was evident. I thereon made two falſe Prognoſtications, and began to complain of the Uncertainty of Dr. *Solano*'s Critical Indication. However, it is to be obſerved, that in this Interval *the Pain in the Forehead and Temples grew worſe*, until it was abated on the 19th in the Evening by a Fomentation of warm Water; and the Noſe was *ſo dry*, that even on blowing it, which I made the Patient do from time to time, *not the leaſt Mucus could be forced from it.*

The 20th in the Morning the Pulſe was natural, and the Patient better; but the *Rebounding* appeared again in the Afternoon, and continued evident till the 22d in the Morning. Grown cautious by my two laſt Diſappointments, I abſtained from any new Prognoſtications; but as the *Dryneſs of the Noſe* continued, I ordered a Fomentation of warm

warm Water for the Head the 21ſt at Night, and the 22d in the Morning, to bring the Veſſels to their natural Laxity, and waited the Event in Silence. This Method was attended with the deſired Succeſs; for immediately after the ſecond Fomentation the Patient *bled at the Noſe*, to the Quantity of *twenty Drops*; whereon his Head was eaſed, and the *Rebounding* became *almoſt inſenſible*. He was purged after the Hemorrhage.

From the 22d in the Afternoon to the 28th, the *Rebounding* was *by Intervals* regular and anomalous, and the Head generally *giddy*.

The 28th, late in the Evening, I went to the Hoſpital alone, and found the *Rebound ng very ſmart, the Pulſe ſtrong, and the Weight and Giddineſs in the Head greater than uſual*; from which I confidently prognoſticated *an impending Hemorrhage*, ordered a Fomentation of warm Water for the Head and Noſe, and told the Preſident of the Ward, I was perſuaded *the Hemorrhage would immediately enſue on the Relaxation of the Veſſels*. The Fomentation was applied in an Hour after, and *ſcarce had the Patient ſucked up a little Water into his Noſe, when about twelve Drops of Blood immediately followed*. I muſt acknowlege this Prognoſtication, ſo perfectly fulfilled, gave me a great deal of Pleaſure, the

more becauſe I am certain I never ſhould have even thought of it independently of Dr. *Solano*'s Obſervations.

So ſmall an Hemorrhage was not ſufficient to diſcharge the Head; this continued *heavy and giddy*, and the Pulſe *rebounded ſmartly* all the following Day, but *ſomewhat irregularly* the two next. On this I determined to try, whether there ſtill remained a latent Diſpoſition to an Hemorrhage, and to make a laſt Effort to eaſe the Patient's Head by this Evacuation: Wherefore I ordered him two ſuch Fomentations as above, the one the 31ſt of *October* at Night, and the other next Morning. I ſucceeded in my firſt Intention; for Nature anſwered the Call after the ſecond Fomentation by *a ſmall Appearance of Blood*, but was diſappointed in the other, *viz.* the Relief of the Head. The *Rebounding* continued ſlight all Day, and at Night I obſerved by the Thickneſs of the Patient's Speech, that his Tongue grew torpid, and conſequently that a Compreſſion began to fix on the Nerves in the Head.

Dr. *Solano*, who from the 16th of *October* treated the Patient without any regard to the Hemorrhage, which we judged could be of no main Uſe in a Diſtemper of this kind, was now carrying on the Cure in ſuch a manner as was abſolutely inconſiſtent with the Share

I took in this Obſervation; on which I began to drop it, and from the firſt of *November* viſited the Patient only once a Day. Among other Remedies, the Doctor ordered *aſtringent Lotions* to be applied to the Forehead and Temples, to prevent the Hemorrhage, and Purges by Intervals. The *Rebounding* Pulſe continued in the mean time either *ſlight or irregular* to the 4th of *November*. This Day in the Afternoon, when I felt the Pulſe, the *Rebounding appeared evident and ſtrong*, but *ſlackened again* till the 8th in the Evening, when it grew *manifeſt and vehement*, and next Morning the Patient had *a more abundant Hemorrhage* than any of the former: But the Symptoms in the Head increaſed.

The reſt of this Caſe, while I remained in *Antequera*, is not worth relating. Dr. *Solano* wrote to me after my Departure, that the Patient had *two Hemorrhages more, each of which was preceded by the Rebounding Pulſe*, which at laſt diſappeared, when the Obſtructions were removed, and the Patient recovering.

This ſo conſtant a Diſpoſition to an Hemorrhage by the Noſe, and the Symptoms which attended, ſeem to have derived their Origin from the Obſtruction of the *Hypochondria*, and the Compreſſion thereby produced on the

inferior Aorta, with a conſequent overflowing of the Blood towards the Head.

Such are the three Obſervations which occurred on the *Rebounding Pulſe*, while I was in *Antequera*.

Observation IV.

In the Year 1737, ſoon after my Return from *Antequera*, Maſter *William Tyrry*, Son to *John Tyrry*, Eſq; and Grandſon to the *Marquis de la Canada* of *Cadiz*, was indiſpoſed of a ſlight Fever, with a Pain in his Head and Stomach, which proceeded from an Indigeſtion. I found him *bleeding at the Noſe*, with a *Rebounding* in the Pulſe *at every Diaſtole*; he bled to near the Quantity of half an Ounce, and in leſs than a quarter of an Hour after, the *Rebounding* entirely diſappeared *.

Observation V.

In the Hoſpital of *San Juan de Dios* in *Cadiz*, was a young *Negro*, who had Pleuritic Pains and a Cough. The 1ſt of *January* 1738, in the Morning, I found him *bleeding at the Noſe*, and then felt his Pulſe for the firſt time; the Right Pulſe *ſlightly rebounded at every Dia-*

* See p. 4. n. 6.

ſtole,

ſtole, the Left *more ſmartly*, *but not continually*: Thus the Pulſe remained *in and after this Hemorrhage*, until within a ſhort Interval of Time, the Patient *bled again in a ſmall Quantity*. I thereon examined the Pulſe a ſecond time, and obſerved a ſimple *Diaſtole regularly alternating with a Rebounding one*; this laſt *gradually ſlackened*, *grew leſs frequent*, *and ſoon gave entirely way to the natural Tenor of Pulſation* *.

In the Afternoon and next Morning, there appeared *an obſcure Rebounding* in the Pulſe †, and at Four o'Clock of the ſecond Afternoon the Patient *bled a few Drops at the Noſe*. I viſited him in an Hour after, but could not then perceive *the leaſt Rebounding*. He remained in the Hoſpital ſome Days after, without any Symptom of, or Tendency to an Hemorrhage, either in the Pulſe or otherwiſe.

OBSERVATION VI.

January the 2d, 1738, came to the ſame Hoſpital a young robuſt Man with a ſlight Fever, and ſhuddering from a Cold. His Pulſe was full, and *ſlightly Rebounding*. Thus he continued without any other Sign of an Hemorrhage till the 3d at Night, when *in*

* See *p.* 4. *n.* 6. † *Ibid. n.* 7.

making an Effort to go to Stool, a moderate Quantity of Blood ſuddenly burſt out from the Noſe.

The next Morning I obſerved the ſame *Rebounding* in the Pulſe as before; but the Patient would not remain any longer in the Hoſpital.

Observation VII.

In the Year 1738, Mr. *William Knight*, a young Gentleman about the Age of 20, who lived with Meſſieurs *Mannock* and *Ryan*, Eſqrs. in *Cadiz*, fell ill of a mortal malignant Fever, in the very Begining whereof I obſerved, with ſeveral Signs of a violent Irritation, *a continual Rebounding* in the Pulſe; thus he continued without any Hemorrhage for two Days, at the End of which, *in the Effort of a ſpontaneous Vomiting, the Blood burſt forth ſmartly and in a moderate Quantity from the Noſe.* I obſerved the ſame Pulſe the next and the following Day; no new Hemorrhage appeared, but the Patient became *delirious*, and ſo continued till he died in four Days after.

Theſe two laſt Obſervations are Examples of the Delay of the Hemorrhage, from the Reſiſtance of the Blood-Veſſels mentioned *p.* 64. No. 5.

Observation VIII.

The 10th of *March*, 1738, a young robuſt Man came to the ſame Hoſpital with a Quartan Ague, and the *Rebounding Pulſe*. The former was hitherto attended with this particular Circumſtance, that *an Itching of the Noſe began, augmented, and decreaſed, in the ſame Proportion as the Paroxyſms did.*

The *Rebounding* of the Pulſe *continued ſlight*, until the Patient quitted the Hoſpital on the 28th of the ſame Month, except the 23d and 24th, on which it appeared *more full and diſtinct*.

He was all this time daily affected with *a Pain or Tenſion in the Forehead, Temples, or whole Head, particularly with an Itching of the Noſe and Eyes, and frequent Sneezing* *.

The 11th, 12th, 13th and 14th Days, the Patient *ſhed a ſmall Quantity of Blood by the*

* To avoid an uſeleſs Repetition of Obſervations, it is proper to remark here, that the Reader may from this laſt Paragraph form to himſelf a pretty exact Idea of the regular Caſes without Hemorrhages, mentioned *p.* 54. The Difference in the different Caſes conſiſted only in the various Combination of the Symptoms mentioned in the Begining of the ſame Page with an Itching in the Noſe and Sneezing, which of all were the moſt conſtant.

Noſe,

Noſe, and the 25th had an Hemorrhage of about 70 *or* 80 *Drops*.

It is remarkable, that on the 11th in the Morning the *Rebounding* was more evident in the Left than the Right Wriſt, *tho' the Pulſe of this Side was laſt then more full, and free from any Impediment* to which the Obſcurity of the *Rebounding* may be attributed. This has alſo happened in ſeveral other Perſons.

Observation IX.

Chriſtoval Romero was brought to the ſame Hoſpital the 18th of *February*, 1738; for the five preceding Days he was, from a cold Wind, affected with *a Pain in the Head*. On feeling his Pulſe, *Don Pedro Roxo*, Phyſician of the Hoſpital, obſerved *a continual Rebounding at every Diaſtole*. The 19th I found the ſame; it was ſlight, and in the Evening gradually diſappeared: It returned again the 20th in the Morning, became ſomewhat obſcure in the Afternoon, and ſo continued till the 23d in the Morning.

The 18th, and the Night following, the Patient *bled at the Noſe* eight times in a large Quantity, whereby his Head was relieved. The 19th he *bled twice*; the ſecond Hemorrhage was pretty conſiderable, and relieved

lieved the Head ſtill more. The 20th the only remarkable Symptom was a remaining Pain on the *Occiput*; to this on the 21ſt in the Afternoon ſupervened a Pain in the Temples, and both were at Night aſſwaged by a Fomentation of warm Water. The 23d he ſtill complained of the Remains of his Head-ach, and began to grow ſtupid; the next Day he became delirious and drowſy; in the Morning the Pulſe *intermitted* ſometimes *after the third and eighth*, but generally after *the fourth Pulſation*; a *Diarrhœa* enſued *the ſame Day*, but without any Relief to the Patient, who grew convulſive, and died in a few Days.

I have obſerved another Caſe analogous to this, in the Begining of which, though the Patient, who had the *Rebounding Pulſe*, *bled plentifully at the Noſe*, he ſtill became for ſome Days *ſtupid* and *cataleptic*.

By theſe two Caſes, Obſervation the 7th of this Chapter, and others, it is manifeſt that the Appearance of Dr. *Solano*'s Pulſes is not limited to *Criſes* ſtrictly ſo called, and therefore does not excluſively denote them. The Reſult of all the *Phænomena* is the Rule to determine, whether the Evacuations ſignified by theſe Pulſes are to be Critical or Symptomatical. However, they may be juſtly called *Critical Pulſes*, from the chief Uſe to which they are applied.

OBSER-

Observation X.

Extracted from a Letter of my late Friend Dr. Don Pedro Roxo, *Honorary Member of the Medical Academy of* Madrid, *and Phyſician of the Hoſpital of San* Juan de Dios *in* Cadiz.

. . . . . This laſt Week occurred in my Hoſpital another Caſe of an Hemorrhage by the Noſe, in a Lad who was ſick of a ſlight Fever, with *a great Pain in the Temples*. I obſerved in him a ſmall *Rebounding* of the Artery *at every Diaſtole*, as did alſo ſeveral of the Monks who aſſiſt the Sick, and Dr. *Don Franciſco Garzia*, who happened to be then preſent: On this *I prognoſticated an Hemorrhage of the Noſe, without any Limitation of Time*. The Patient continued in the State juſt now deſcribed, without any Change or Remedies, for the Space of *two Days*; he then *bled at the Noſe* to about the Quantity of ſix Ounces, by which the Pain in the Temples was very much abated. I viſited the Patient in a few Hours after, and obſerving the ſame *Rebounding* in the Pulſe, *I prognoſticated another Hemorrhage*†, which accordingly *happened next Morning*; whereon the *Rebounding ceaſed*, and the Patient recovered. Dr.

† See *p.* 4. *n.* 7.

Garzia

Garzia was greatly pleaſed with this Obſervation, the firſt Hemorrhage he has ſeen prognoſticated by the Pulſe.

Cadiz, October 7. 1737.

Don Pedro Roxo.

Observation XI.

Communicated to me by my Friend Don Juan de Pedraza y Caſtilla, *Batchelor of Philoſophy and Phyſic.*

..... Among my other Obſervations the following one is very ſingular: I was called to viſit *Juan de Toledo*, a Lad of nineteen Years, and of a thin Habit of Body. He lives in *Calle de lá Yglefia* * (a Street) and was then labouring under a Double Tertian Ague. I obſerved in the Intermiſſion of the Fits *an extremely ſlight Rebounding of the Pulſe at every Diaſtole, which grew more manifeſt exactly in Proportion as each Fit came on and increaſed.* The firſt Time I made this Obſervation, *I prognoſticated to the Patient an Hemorrhage by the Noſe in the Fit he then had*, and in my Viſit next Morning he told me, that the Night before, in the Height of his Fever, the he felt a great Suffocation, with

† In *Rio gordo*, a Village in *Andaluſia*, where this Obſervation was made.

an

an Itching of the Noſe, and bled from that Part to the Quantity of three Ounces. This and the following Days *I repeated the ſame Prognoſtication, for the ſame Reaſon, and with the ſame Succeſs:* But finding theſe Hemorrhages rather weakened than relieved the Patient, I neglected them, and gave him a few Doſes of *Tartarum Vitriolatum, Nitre of Antimony, and Salt of Wormwood*; whereon the Fever, the *Rebounding* of the Pulſe, and the Hemorrhages diſappeared.

He adds, this Obſervation ſerved me as an Example in two other Lads, *Joſeph Manojas* in the ſame Street, and *Juan Pernia* in the *Calle del Cura*, who were afflicted with the ſame Species of Fever, and with Hemorrhages which I alſo foretold by the *Rebounding* Pulſe. They recovered by the Uſe of the ſame Remedy.

Antequera, November 13. 1738.

Don Juan de Pedraza y Caſtilla.

Observation XII.

In a Letter I received from the ſame Perſon, the 21ſt of March, 1738, *is the following Paragraph.*

Our Friend *Don Chriſtoval Solano* is in the 6th Day of a continual putrid Fever, but without any dangerous Symptoms; he has had, juſt now, an *Hemorrhage by the Noſe*, and another more plentiful this Morning, both preceded by the *Rebounding Pulſe*, which yet remains, but very ſlight. If any Change worth your Notice happens in the Courſe of this Diſtemper, you ſhall know it by next Poſt.

Don Juan de Pedraza y Caſtilla.

CHAP. II.

New Obſervations on the Intermitting Pulſe.

Observation I.

THE 20th of *January*, 1738, *Sylveſtre de Grana*, a Man of a robuſt Conſtitution, and fleſhy firm Habit of Body, and about the Age of Forty, came to the Hoſpital of *San Juan de Dios* of *Cadiz*, with a Pain in the Right Side and ſuperior Part of the *Thorax*, which extended to the Arm: This Pain began the 18th, and was attended with a Fever, Thirſt, a hard Pulſe, and a moiſt Cough. It afterwards ſhifted to the Left Breaſt and Shoulder, and grew ſo violent, that the Patient could not lie down: He was thereon twice blooded and relieved; but the Pain again becoming very intenſe, a Cupping-glaſs, with Scarifications, was applied to the affected Part, whereby he was relieved: Nevertheleſs, the 10th Day of the Diſtemper he was ſo fatigued with the Pain, and ſo uneaſy, that he could not lie on either Side, but was obliged to ſit up in his Bed, the Pulſe became low, unequal, and *intermitting* almoſt

moſt *at every Pulſation*. This is the Account I received of the Diſtemper from my Friend *Don Pedro Roxo*, Phyſician of the Hoſpital.

I was the ſame Day, *viz.* the 28th of *January*, adviſed of the State the Patient was in, and viſited him. I found the Pulſe *regularly intermitting at every ſecond and third Diaſtole*, and thus it continued till the 5th of *February*, on which Day the Patient died after a very ſhort Agony.

From the 28th of *January* to the Day laſt-mentioned, he had *a ſlight Looſeneſs, Gripes, a Rumbling in the Inteſtines, and Eruption of Wind downwards.*

The laſt Days the Patient complained of a *Palpitation*, and the Day before he died, examining the Region of the Heart, I plainly felt at each Inſpiration a Motion ſomewhat like that of the Air in an *Emphyſema*, or of Phlegm in the *Trachea*, on which I concluded there was an *Extravaſation* of ſome Fluid in the Cavity of the *Thorax*, or in the *Pericardium*. This and the other Circumſtances of the Diſtemper engaged me to open the Body, and I preſume it will not be diſagreeable to the Reader to find here an Account of my Diſſection, partly that he may be ſatisfied I do not conceal any Circumſtance that might ſeem to claſh with the Tendency of the pre-

ſent Treatiſe, partly becauſe ſuch Caſes, tho' not unknown in Phyſic, are not common.

I found the *Pleura* thick and ſpongy, and the Lungs adhering to it, but without any viſible Alteration in their Subſtance. On Opening the *Pericardium*, there flowed from it about a Pint of inodorous yellowiſh *Pus*; then appeared the Heart, but ſo ſpongious in all its Surface, and ſo covered with the Lees of the *Pus*, that I did not at firſt Sight know it, particularly becauſe it on all Sides adhered to the *Pericardium* by a great Number of membranous Productions or Strings, which quite disfigured it. The interior Surface of the *Pericardium* was in the ſame State, nor was the *Mediaſtinum*, which alſo contained its Quantity of *Pus*, in a different Condition. In the Right Side of the *Thorax*, under the *Clavicula*, was a purulent Bag, of the Bigneſs of an Egg, between the *Pleura* and Intercoſtal Muſcles. The inferior Surface of the Right *Lobe* of the Lungs, with the correſponding Part of the adjacent *Pleura* and *Midriff*, formed another but a large Bag of the like purulent Matter, interiorly ſpongy like thoſe above deſcribed.

Part of the inferior Border of the great and leſs *Lobe* of the Liver was livid, the Gall-bladder almoſt empty, the Spleen ſomewhat ſwelled, and almoſt the whole Tract of the

ſmall

ſmall Inteſtines within a ſhort Diſtance of the *Cæcum* inflamed; out of the *Jejunum* I took about a Dozen of pretty large Worms.

I examined the Heart and *Pericardium*, after two Days Maceration in Water, the interior Membrane of the latter appeared cellular, and with the Lees of the *Pus* looked perfectly like the *Membrana adipoſa* of a well-fed Perſon. Between the two *Laminæ* of the *Pericardium* I obſerved a red fleſh-like Subſtance of the Thickneſs of one Line. Whether theſe were muſcular Fibres, I will not pretend to determine. The Inflammation did not reach the Subſtance of the Heart, and was confined to its exterior Coat. In the Right Ventricle was a ſmall *polypous* Subſtance, of a pale fleſh Colour and pretty ſolid; it adhered to the Side of the Ventricle below the venal Valves by ſome ligamentous Strings which it projected into the Fleſh, and thence was ſtretched out into the *Auricula*, in the Centre of which it was fixed by a ligamentous String, which ran through it from one Side of the *Auricula* to the other.

In the Hiſtory of this Diſſection are ſome Cauſes, to which the Intermiſſion of the Pulſe may probably be attributed, and which thereby may tend to diminiſh the Weight of the foregoing Obſervation in the *Solanian* way. But this is to be left to the Judgment of the

Reader, after a prudent Conſideration of the whole Caſe, and of other correlative Facts with regard to the Connexion obſerved between the *Intermitting Pulſe* and a *Looſeneſs*, *Gripes*, *&c.*

From this Obſervation I beg Leave to make the curſory Remark, that it is very manifeſt with what Briskneſs and Vigour the Progreſs of internal Inflammations is to be oppoſed, and of conſequence how greatly the Event of Acute inflammatory Fevers depends on the Method made uſe of *in their very Begining*; for when the Inflammation riſes to a certain Pitch, not all the Power of Medicine can prevent a Suppuration, or the combined Knowledge of the whole Faculty anſwer for the Conſequences of this when once formed.

Observation II.

January the 20th, 1738, in the Afternoon, *Manuel Carrera* had a *ſlight and ſhifting Intermiſſion* in the Pulſe. He was then troubled *with a great Eruption of Wind by the Anus*, and in the Night had *two very windy Stools*. I felt his Pulſe the Morning before, and the two Days following; but could obſerve *no Intermiſſion*, nor did the Patient then complain of any Diſorder of the Belly.

Obser-

Observation III.

January the 29th, 1738, a little *Galician* Boy had *a conſtant Intermiſſion in the Pulſe at every third and fourth Diaſtole.* From thence till the next Evening at my Return *he had five looſe Stools.* Then I obſerved the *Intermiſſion leſs frequent, and ſhifting*; and the Morning after, he quitted the Hoſpital.

Observation IV.

The 30th of *January*, 1738, I obſerved in a Patient, whoſe Name I then neglected to write down, *a ſlight ſhifting Intermiſſion in the Pulſe* for a little while; whereon I asked him, if he had a Looſeneſs. He told me he had that Day had *two Stools*, and at the Time he was ſpeaking to me, felt *a great Rumbling in the Inteſtines:* this continued the following Night, in which he had *another Stool.*

I did not obſerve any *Intermiſſion* in his Pulſe, either before or after the Time now mentioned, *viz.* the 30th in the Evening.

Observation V.

The 22d of *February*, 1738, I obſerved towards Evening, in *Michael Emes*, an *Engliſh* Sailor, who was ſick in the ſame Ho-

ſpital with the above-mentioned Patients, *a ſhifting Intermiſſion in the Right Pulſe*, recurring at the *fourth, fifth, and ſeventh Pulſations*; it *diſappeared* ſometimes by long Intervals, and then *returned as before*. The next Morning *the Intermiſſion* was much more *ſlight, and leſs frequent*. The Patient had *three looſe Stools* ſince the 22d at Mid-day, and at Night *a Rumbling in the Inteſtines*.

Observation VI.

October the 14th, 1737, when I was in *Antequera*, *Don Pablo de Caſtilla*, a Boy of 11 Years old, and Nephew to my above-mentioned Friend *Don Juan de Pedraza y Caſtilla*, after an Exceſs in eating Fruit, fell ſick of a Quartan Ague.

At Nine o'Clock next Morning, *Don Juan de Pedraza* obſerved the Pulſe *to intermit for the Space of a common Diaſtole after every Pulſation*, and ſent to give me Notice of it. I viſited the Patient at Ten, and *he had in the mean time four Stools*. I then found the *Intermiſſion leſs frequent and decreaſing*, *and it* continued *irregular and ſhifting* all the reſt of the Day. From 10 to 12, he had *three ineffectual Urgings to Stool*.

The Pulſe continued in much the ſame *irregular State* for the three Days following, with *a ſlight Looſeneſs*, and *Efforts to go to Stool, Wind, and Rumbling in the Guts by Intervals*. The Patient was purged the 4th Day, and vomited *a Worm* five Inches long. The *Intermiſſions and Stools* became thereon *yet leſs frequent, and without any Efforts, Wind, or Rumbling in the Inteſtines*, till the 22d of *October* in the Evening; *then the Intermiſſion regularly recurred at one or other of the following Periods of Pulſation*, and moved for ſome time in the ſame Period, before it paſſed into another. Theſe Periods were *every ſecond, third, fifth, eighth, tenth or eleventh Diaſtole*. On this *greater Regularity of the Intermiſſion*, tho' not ſuch as is required by Dr. *Solano*'s Rules, I ventured to prognoſticate a *Diarrhœa*, and accordingly in the Courſe of the Night the Patient had *three or four Stools*.

The *Intermiſſion* became again *leſs frequent, and ſhifting*, and the Belly *more tight*, till both the one and the other came gradually to the natural State.

Observation VII.

Communicated in a Letter from my Friend Don Juan de Pedraza y Caſtilla.

Laſt Week viſiting a Patient with Dr. *Don Antonio Alvarez*, we found her in an Acute Fever, with *an intermitting Pulſe in the Degree which denotes a Diarrhœa within the Space of* 24 *Hours*. The Doctor was for Bleeding the Patient, but deferred this Remedy in Expectation of the *Diarrhœa*. The next Day we were ſurpriſed to find *the Intermitting Pulſe had diſappeared*, and ourſelves *diſappointed in our Hopes of the Diarrhœa*. On examining the Patient, ſhe told us, that ſince our laſt Viſit, her *Menſtrua* broke out, and ſtill continued. We reaſoned variouſly on this Accident, but preſcribed no Remedies under ſo critical Circumſtances. After two Days the *Intermiſſion returned, and was followed by ſix or ſeven Stools*.

This Caſe ſeems to me very ſingular. When you give me your Opinion of it, I ſhall ſend you an exact Detail of all the Circumſtances with which it was attended; for I expect

expect to be then more at Leiſure, than my Occupations now admit, *&c.*

Antequera, April the 2d, 1738.

Don Juan de Pedraza y Caſtilla.

OBSERVATION VIII.

My Friend *Don Chriſtoval Solano*, ſoon after his Father's Death, communicated to me an Obſervation exactly like the foregoing one, in all its eſſential Circumſtances. *The Intermitting Pulſe* appeared in an Acute Fever after two Blood-lettings and a Purge; *it ceaſed on the Eruption of the Menſtrua, returned when theſe were over*, and was this laſt time attended with *a Critical Diarrhœa* *.

OBSERVATION IX.

Communicated by my Friend Don Juan de Pedraza.

Among other late Obſervations concerning Dr. *Solano*'s Diſcovery, the following Caſe, which we have yet in our Hands, I hope will prove agreeable to you. *Pedro de Avila*, a Man of ſixty Years, fell ill

* See a like Obſervation from Dr. *Gomez*, p. 31.

of

of a Double Tertian Ague attended with *the Intermitting Pulſe*; but with this particular Circumſtance, that *it accompanied only one of the two diſtinct Fits this Ague was compoſed of, following regularly that with which it began*, without ever once appearing in the other during the whole Courſe of the Ague.

This *Intermiſſion of the Pulſe* recurred at *the third, fourth and ſixth Pulſation*; it was *ſlight*, and *regularly brought with it a Diarhœa*, by the means of which alone the *Paroxyſm* it accompanied has almoſt entirely diſappeared, and the other, which from the Begining was the more violent of the two, is now very much diminiſhed. I am, *&c.*

Antequera, Auguſt the 6th, 1738.

Don Juan de Pedraza y Caſtilla.

How regular, how ſteady, how ſtriking are the Motions of Nature in theſe three laſt Obſervations!

OBSER-

Observation X.

From the ſame Perſon.

I have ſeveral other Obſervations to communicate to you, concerning *Critical Sweats and Diarrhæas previouſly indicated by their reſpective Pulſes*; but muſt reſerve them for next Opportunity. In the mean time I think proper to give you Notice, that I have obobſerved ſome Caſes of the *Intermitting Pulſe*, in which *no Diarrhœa appeared*, but in its ſtead *a great Tumult and Murmuring in the Belly, with an Expulſion of Wind by the Anus.*

Antequera, November the 13th, 1738.

Don Juan de Pedraza y Caſtilla.

A General Observation.

Communicated by the ſame Hand.

. . . . . We have at preſent in our Hands another Caſe of a malignant inflammatory Fever, in which *appeared ſucceſſively three different Criſes*, the one by Sweat, the other by Stool, and the third by an Hemorrhage of

of the Noſe, *each previouſly indicated by its reſpective Pulſe*, and the Patient is better. Of this and other Obſervations I will ſend you an exact Detail as ſoon as I ſhall be at Leiſure, *&c.*

Antequera, May the 21ſt, 1738.

Don Juan de Pedraza y Caſtilla.

Several Incidents which afterwards intervened, at firſt interrupted, and at laſt entirely ſuſpended my Correſpondence with this Gentleman; which is the Reaſon why in ſome of the foregoing Obſervations, which were occaſionally communicated to me as they happened in the Hurry of Practice and different Occupations, the Names of the Patients, and other particular Circumſtances of Credibility, were not properly ſupplied according to his and my Intention.

CHAP.

CHAP. III.

A ſhort Account of the firſt Riſe of Dr. Solano's *Obſervations.*

HAVING hitherto given an exact and faithful Account of the moſt eſſential Things concerning Dr. *Solano*'s Obſervations on the Pulſe; confirmed and illuſtrated them by ſeveral new Facts never before publiſhed; having traced out ſome Inſtances of the ſame Kind in the *Ancients*, and alleged, in the various weighty Teſtimonies which concur in favour of theſe Obſervations, the ſtrongeſt Proofs that can be required of their Truth and Reality; it now remains I ſhould gratify the Reader's Curioſity with an Account of the firſt Riſe of *Things ſo extraordinary*, the *moſt extraordinary indeed* that have been publiſhed ſince the Diſcovery of the Circulation of the Blood!

In the Year 1707, when Dr. *Solano*, then a Student in Medicine, attended the Practice †

† It is a Cuſtom in *Spain*, that after reading Medicine, the Candidates for Doctor's Degree ſhould attend the Practice of ſome Phyſician for two Years, without which they are not admitted. Every Phyſician of Repute has always a Diſciple of this kind, who is called a *Practicante*, or *Paſſante*.

of

of Dr. *Don Joſeph Pablo*, Profeſſor and Vice-Dean of the Univerſity of *Granada*, in the Hoſpitals of *San Juan de Dios*, *del Refugio* and *el Real*, he often obſerved the *Rebounding Pulſe* in various Patients, and applied for the Reaſon and Significancy of it to Dr. *Pablo*, who deſired him *to take no Notice of ſuch Trifles*, which proceeded merely from *fuliginous Vapours:* Whereupon *young Solano* gave no farther Attention to this Matter, until he remarked, that the Perſons who attended the Sick, in the Accounts they daily gave Dr. *Pablo* of what happened in his Abſence, from time to time, made mention of *Hemorrhages by the Noſe* in the very Patients in whom he, *Solano*, had obſerved *the Rebounding Pulſe*. This excited his Curioſity and Attention, and after a ſerious Reflection urged him to a more cloſe Examination of the Matter.

The next Patient in whom he obſerved the *Rebounding Pulſe* was a young Man of the Age of Twenty-two, in *a Burning Fever:* reſolved to ſee what the Event would be, he privately prevented the Exhibition of the Remedies preſcribed for the Patient by Dr. *Pablo*, yet was under the moſt violent Uneaſineſs of Mind from the Authority of *Avicenna*, whom he had juſt read, and who ſays, † *Pulſus Martelinus* (ſo

† *L.* 4. *Fen.* 2. *Tract.* 1. *cap.* 27.

he

he calls the Rebounding Pulse) *malus est.* However, encouraged by what happened to the other Patients in whom he had observed the same Pulse, he determined to trust this Case to Nature.

In these Apprehensions *young Solano* passed the whole Day, from Five o'Clock in the Morning until Six in the Evening, when *appeared an Hemorrhage by the Nose*, which, including some Intervals, lasted for the Space of an Hour and a Half; the Blood flowed moderately, and in all this Time amounted to about *Six Ounces.*

From the Begining to the End of the Hemorrhage, *our curious Observer* did not quit the Patient's Pulse: He remarked that in Proportion as the Hemorrhage diminished, the Fulness and Frequency of the Pulse abated, and the Rebounding gradually slackened, and became almost imperceptible, but rose again and became evident some time before every Renewal of the Hemorrhage; and tho' from the Begining of the whole Hemorrhage the Fulness and Frequency of the Pulse abated gradually, yet the Rebounding revived by Fits before every Return of the Hemorrhage, until this was entirely over. By this Crisis the Patient perfectly recovered.

A Case

A Caſe ſo extraordinary gave *young Solano* an inexpreſſible Pleaſure and Surprize. In a few Days after, he had the Satisfaction of making a like Obſervation in another Patient of the Age of 40, in a Fever of the ſame kind, and with the ſame happy Succeſs, with this Difference, *that the Hemorrhage was leſs than the former, and the ſecond Stroke of the Artery weaker than the firſt*; from which our *Obſerver* took the firſt Hint of judging of the Quantity of the future Hemorrhage by the Pulſe.

By a conſtant Application to all Caſes of this kind that occurred, the *Doctor*, by degrees, improved his Obſervations on the *Rebounding Pulſe* to that Pitch which the Reader has remarked in this Work.

The *Doctor's* Attention once fixed on the Pulſe, ſoon opened to him a new Scene of Wonder and Satisfaction in the *Intermitting Pulſe*. In the Hoſpital *Del Refugio* above-mentioned, was a Patient in an Acute Fever, on the *third Day* of which the *Doctor* obſerved the *Intermitting Pulſe* to recur ſometimes at *every ſeventh*, ſometimes at *every eighth Pulſation*, which, together with the Greatneſs of the Diſtemper, according to the then eſtabliſhed Rule of Prognoſtication *,

* See *p.* 75.

he

he at firſt judged *a mortal Sign.* But afterwards reflecting on his Obſervations on the *Rebounding Pulſe*, he determined to watch carefully every Turn of this Caſe, and examine whether the *Intermitting Pulſe* was attended with any Effect analogous to thoſe he had obſerved conſequent to the *Rebounding Pulſe.* He prevented the Exhibition of the Remedies preſcribed, as he had done in the former Caſes: But here again recurred the Doubts and Perplexities which before tormented the *unexperienced Obſerver* in the firſt Caſe on Hemorrhages; they kept him on the Rack all *the third* and half of the *fourth Day*; after which the Patient, who was then afflicted with *a great Anxiety and ſharp Griping*, fell into an abundant *Diarrhœa*; the Doctor, who had Notice of it, went immediately to the Hoſpital, and examining the Patient's Pulſe, he found the *Intermiſſion* recurring at *every ſecond Pulſation*; and in the Space of 12 Hours that he remained with the Patient, frequently feeling the Pulſe, he obſerved the *Intermiſſion* to leſſen, as the *Diarrhœa* proceeded, until at laſt it entirely ceaſed, leaving the Patient free from all Complaint.

Thus did the *young Obſerver* daily find new Lights breaking in upon him, at once recompenſing and encouraging his Diligence. He ſucceſsfully purſued his Obſervations the

reſt of the Year 1707, but always *underhand*, to avoid the Diſpleaſure of Dr. *Pablo*, a Man of a very violent Temper, for preventing the Exhibition of the Remedies he preſcribed to the Patients who had the *Rebounding* and *Intermitting Pulſes*; at laſt, in the Year 1708, the Doctor had the Satisfaction of exerting the Skill he had acquired in this way, in a public and authentic Manner.

Doctor *Don Franciſco del Caſtillo* was taken ill in *Granada* with an Acute Fever. The Diſtemper was violent, and the *Doctor* attended by three celebrated Phyſicians of that City. On the *ſixth Day* of the Fever, they obſerved the Pulſe to *intermit after every ſecond Pulſation*; whereupon they unanimouſly pronounced the Patient would infallibly die. Young *Solano*, who then attended his Preceptor *Dr. Pablo*, begged Leave to deliver his Senſe of the Caſe, and told them he took the *Intermiſſion of the Pulſe for an Effort of Nature to diſcharge the morbid Humours by Stool*; but the *young Man* was *quickly ſilenced*, his Opinion *was raſh, and contrary to Galen.* The Conſultation broke up, prognoſticating to the Family the Death of the Patient.

At Eight o'Clock the ſame Night, the Patient felt *moſt violent Pains in the Belly*, particularly above the *Pubis*, and earneſtly cried out for ſome Remedy. A Meſſenger was immediately diſpatched to one of the Phyſicians, who ordered the Belly to be anointed with *Oil of white Lillies*. The Pains nevertheleſs increaſed to ſuch a Degree, that the Patient, in the utmoſt Anxiety, ran out of Bed into a Corner of the Room. All the Family, alarmed at this odd Scene, haſtily flocked about him, and found that he had evacuated *a large Quantity* of *thick dark Urine*, and diſcharged *two or three Stools*; after which he returned quietly to Bed, ſlept the Night out ſoundly, and awoke free from his Fever.

The Mention of the *Diarrhæa* before it happened, particularly in Conſequence of a Symptom which the Phyſicians declared *mortal*, did no ſmall Honour to young *Solano*, and gained him the favour of one of theſe Gentlemen; but he reaped no real Benefit by it, becauſe he was not then a Graduate Phyſician, and was by his narrow Circumſtances obliged ſoon after to go and practiſe in *Illora*, a ſmall neighbouring Town.

In this Town, to which he was Titular Phyſician, towards the End of the Year 1709, or the Begining of 1710, he often obſerved *an unequal Pulſe*, of which he took no great Notice, until, by the particular Diligence with which he always examined the Pulſe ſince the above-mentioned Obſervations, he found it *recurring at regular Periods*, in the ſame manner as the *Rebounding and Intermitting Pulſes* frequently did. By this time, ſufficiently prepared for every Novelty that might occur in the Pulſe, he carefully examined this one, and obſerved that it was generally attended with *Critical Sweats*, and ſometimes with *a ſimple Moiſture of the Habit*, or *cutaneous Eruptions* (theſe two laſt he does not mention in his Rules of Prognoſtication); and by degrees improved his Obſervations on this, the *Pulſus Inciduus*, as he had done thoſe on the *Rebounding* and *Intermitting Pulſes*.

The Doctor now became remarkable in *Illora*, for the Prediction of *Criſes*; and *Franciſco de Caſtro Palomino*, a Surgeon who lived in the ſame Town, deſirous of knowing the Rules by which the Doctor made ſo many ſurpriſing Prognoſtications, as he had been himſelf Witneſs to, the Doctor inſtructed him therein, and admitted him to viſit his Patients; whereby he acquired ſo much Experience

perience in this way, that, after Dr. *Solano* quitted *Illora*, by various happy Prognoſtications, he became famous in that Place, and was recurred to in all urgent Caſes.

The next Perſon to whom the Doctor communicated his Art of Prognoſtication, was *Don Pedro Fermin*, who then attended his Practice in *Rute*, and often afterwards ſucceſsfully foretold Criſes in *Iznajar* and *Granada*, where he practiſed *Medicine*. To theſe two Gentlemen Dr. *Solano* publickly appealed, as Witneſſes of the early Date of his Obſervations on the Pulſe.

Such is the Account I had from Dr. *Solano* concerning the firſt Riſe of his new Obſervations: It is in ſome Circumſtances (foreign to the mere Medicinal Part of the Account) different from that which he publiſhed in the *Lapis Lydius*, in which he diſguiſed ſo much of the Matter as might give Offence to his Preceptor Dr. *Pablo* above-mentioned.

Dr. *Solano* acknowleged himſelf indebted to the *Ancients* for various acceſſory Lights concerning the Prediction of Criſes, Lights which could not be obtained by the Pulſe. The Reader muſt have remarked, that in ſeveral Caſes related in this Work, the Doctor foretold the *Criſes* to an Hour, tögether with ſome of their concomi-

tant Circumſtances: This at firſt Sight appears extremely ſurpriſing and incredible to every one who does not recollect the Obſervations of the *Ancients* on the Nature, Character, general Courſe and particular Paroxyſms of Acute Fevers, and on the different Periods at which in theſe Fevers and Paroxyſms different *Criſes* commonly appear; but from a Review of theſe Circumſtances the Wonder ceaſes, and it is readily conceived how a Criſis indicated by the Pulſe may be determined to a particular Hour, and particular attending *Phænomena*. Thus, for Example, in an Acute Fever with regular Paroxyſms, ſhould the Pulſe denote a Criſis by Sweat within the Space of twenty-four Hours, that Hour in which the *Remiſſion* of the Paroxyſm is expected, is to be determined for the Time of the Criſis, which according to the ſpecific Nature, the Violence or Mildneſs of the Fever, the Strength, Conſtitution, Age, and various other Circumſtances in the Patient, together with the Greatneſs of the Criſis itſelf, will be attended with, or free from, a *Delirium*, *Rigor*, *Anxiety*, *&c.* Theſe general Hints are ſufficient on a Subject which has been ſo minutely treated by the *Ancients*.

It may be proper here to acquaint the Reader with a Circumſtance which has been omitted in the Hiſtory of the *Jaundice* foretold by Dr. *Solano*, *p.* 40. The *Hardneſs* of the

the *Pulſus Inciduus* there mentioned gave the Doctor to underſtand, that the Criſis thereby ſignified would not be a *Sweat*; but it is not expreſſed what determined him to judge it would be a *Jaundice*. This may ſeem a profound Myſtery, that required ſome extraordinary Skill to penetrate into, and ſtill poſſibly keeps the Reader in Suſpenſe: it was really no more than an eaſy Combination of a few obvious Circumſtances of the Diſtemper, a *Melancholia Hypochondriaca*, to which, three Days before the Criſis, ſupervened a *Pain* and *Tenſion in the Hypochondria*; this the Doctor judged would not terminate in a *Diarrhœa*, *Vomiting* or *Flux of Urine*, by the Pulſe which denoted another kind of Criſis; and therefore fixed upon the *Jaundice* as a very natural Conſequence of ſuch a Caſe. Thus does a nice Attention to a few common Circumſtances, collected into one *Point of View*, diſcover the ſilent Operations of Nature, and bring Things to Light which would otherwiſe appear above the Reach of Human Induſtry.

POSTSCRIPT.

Galen, quoted by *Baglivi*, ſays, that an *Intermitting Pulſe after every Pulſation denounces preſent Death*; this *Baglivi* affirms he has himſelf obſerved in Acute Fevers. The only Inſtances of an *Intermitting Pulſe* to this Degree in the *Solanian* way, that I know, are the Obſervation of *Proſper Alpinus*, and *Obſ.* 6. *p.* 134. already related; and it muſt be allowed, that in the firſt of theſe two the Patient, though ſhe recovered by a Criſis, was, or appeared to be, in imminent Danger; and in the ſecond the *Intermiſſion* was, as far as could be obſerved, of ſo ſhort a Duration, that it cannot be inſiſted on either on the one or the other Side of the Queſtion. It is indeed proved by various Obſervations in this Work, that ſeveral Patients in Acute Fevers, with an *Intermitting Pulſe at every ſecond and third Pulſation*, have happily recovered: But the Event of the Caſe mentioned by *Baglivi* ſeems hitherto dangerous, if not fatal. However, the State of the Pulſe may probably contribute to decide this Matter: *A low weak Intermitting Pulſe, particularly at every Pulſation*, may be, generally ſpeaking, a *mortal Sign*; and this ſeems to be the Caſe pointed at by Dr. *Solano*, in his firſt Propoſition on the *Intermitting Pulſe*, which, he

he ſays, *p.* 5. *n.* 1. *then only becomes a mortal Sign, when the Strength requiſite to perform the Criſis thereby denoted fails:* but whether the *Intermitting Pulſe*, under this Degree of *Intermiſſion*, is a fatal Sign *when ſtrong and vigorous*, with whatever has been hitherto offered, is humbly referred to the prudent Conſideration and Experience of the Reader: For, I muſt here repeat it, my Deſign is principally to relate *Facts*, to diſcloſe a new Scene of Obſervation, and to excite Phyſicians of greater Experience and happier Opportunities than myſelf to a ſerious Examen of a Matter ſo extraordinary and ſo important.

Fungar vice Cotis -----

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